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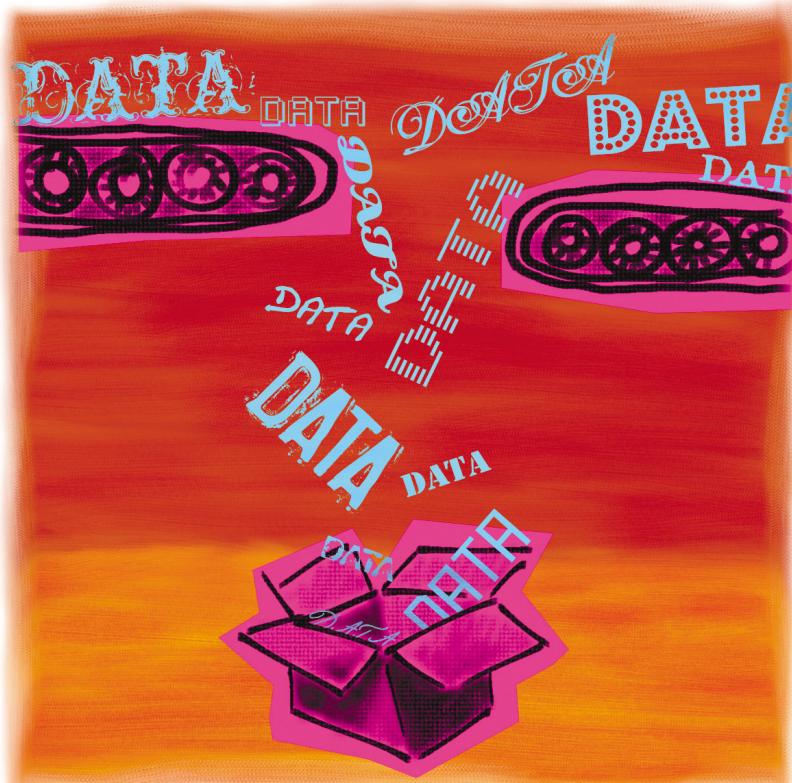
What's New In Storage?

How The Latest Technologies Are Changing The Face Of Storage

by Christian Perry

THE STORAGE LANDSCAPE shifts more frequently than the land surrounding the San Andreas Fault, leaving enterprises often scrambling to discover the best technologies to store, archive, and back up their particular data. Although not all of these changes are significant for small to midsized enterprises, several stand out as potential winners, particularly as SMEs continue to seek the ultimate solution that blends both high performance and cost-effective deployment.

The following technologies receive plenty of play in today's buzzspeak, but they have the potential to become mainstays in the SME space, thanks to their ability to adapt to current needs and allow for future expansion.



Forget The Fibre

When it comes to storage, bang for the buck is a primary driver, and IP SANs are increasingly proving an effective alternative for more expensive Fibre Channel-based solutions. Based on the iSCSI protocol, IP SANs carry storage data over TCP/IP networks, allowing companies to use existing networking staff to focus on the familiar IP environment rather than learning new Fibre Channel technologies. Further, the technology is flexible enough to handle a nicely varied set of tasks.

"IP SANs continue to focus on primary and secondary storage, but [they're] very strong in the video and data mining vertical markets," says David Clark, director of technical marketing and product engineering at iStor Networks (www.istor.com). "The focus continues to be on centralized backup and centralized storage utilizations at increased storage capacity—with focus on consolidation."

Despite the benefits offered by IP SANs, the technology remains in the shadows of more prominent, and more expensive, Fibre Channel products, primarily as seen through the eyes of major vendors. However, for SMEs, the IP SAN represents an affordable solution that can tackle storage demands without the need for specialized personnel.

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Keep It Secure

Tips For Securing The Mobile Enterprise

by Kurt Marko

SECURITY HAS LONG BEEN an important mission for any IT department—serving as one of the rationales for the original formalization of the IT function in most companies—and it's generally a thankless one. Unfortunately for IT professionals, the threat environment has mushroomed since the dawn of the Internet, growing more challenging as users have become liberated from traditional office environments by the proliferation of mobile devices and services.

Today's mobile work habits raise a number of difficult problems for IT

departments: How do you protect systems that are often not in the office on a controlled network? How do you protect the internal network from systems that become contaminated when on the road? What new defenses are needed for mobile systems operating on open networks? How do you protect data on portable devices even if the device itself is lost? How do you provide access to internal data and applications to roving users?

Most IT departments are still grappling with these problems, as evidenced by a survey sponsored by Symantec (www.symantec.com) at Interop last month. Although 70% of 350 respondents currently have security policies for teleworking, only 35%

cannot enforce security settings on laptops and other mobile devices outside the corporate confines.

These issues affect IT departments, large and small, because according to Craig Mathias, founder of Farpoint Group (www.farpointgroup.com), an advisory firm specializing in wireless communications and mobile computing, "there is no real difference in security in large corporations and security in small companies," meaning the problems are the same, only the scale changes. Developing and enforcing appropriate security policies is nothing new for IT managers; however, mobile workers present unique challenges

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Developing and enforcing appropriate security policies is nothing new for IT managers; however, mobile workers present unique challenges requiring distinct policies and enhanced, automated enforcement.

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■ **CP Secure** introduced the Content Security Gateway 110. ■ **Dynamic Network Factory Storage** introduced a new RAID subsystem, the Enterprise F16fz. ■ **eEye Digital Security** launched Blink Professional endpoint security software. ■ **GizMac** launched a new server rackmount cabinet that eliminates much of the noise associated with typical rackmount systems. ■ **iQstor Networks** unveiled the iQstor iQ2880, a 4Gbps Fibre Channel storage system. ■ **Iron Mountain** introduced Retention Center, a Web-based records service. ■ **Sunbelt Software** released its CWSandbox software, which is designed to automatically analyze malware samples. ■ **Wyse Technology** released the latest versions of two thin computing infrastructure management programs.

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1. What is the size of your company (how many employees)?

- Less than 10 200 - 499
 10 - 99 500 - 999
 100 - 199 1,000+

3. What is your annual computer hardware/software purchasing budget?

- \$0 - \$9,999 \$100,000 - \$249,999
 \$10,000 - \$24,999 \$250,000 - \$499,999
 \$25,000 - \$49,999 \$500,000 - \$999,000
 \$50,000 - \$99,999 \$1,000,000+

2. How often do you purchase computer hardware/software?

- Weekly Quarterly
 Bi-weekly Annually
 Monthly No Involvement

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Upcoming IT Events

- NOVEMBER -

FS/TEC

November 5-8
Long Beach, Calif.
www.fstec.com

TDWI World Conference
November 5-10
Orlando, Fla.
www.tdwi.org

Business Rules Symposium Series
November 7-8
New York, N.Y.
www.brainstorm-group.com

Enterprise Architecture
Conference Series
November 7-8
New York, N.Y.
www.brainstorm-group.com

Technology + Learning Conference
November 8-10
Dallas, Texas
www.nsba.org

SC2006
November 11-17
Tampa, Fla.
sc06.supercomputing.org

Philadelphia ITC 2006
November 15-16
Philadelphia, Pa.
www.goitec.com

- DECEMBER -

Search Engine Strategies 2006
December 4-7
Chicago, Ill.
www.jupiterevents.com

Portland ITC 2006
December 6-7
Portland, Ore.
www.goitec.com

ITC East
December 12-13
Harrisburg, Pa.
www.govresources.com

- JANUARY -

Storage Visions 2007 Conference
January 6-7
Las Vegas, Nev.
www.storagevisions.com

WCA International Symposium
& Business Expo
January 16-19
San Jose, Calif.
www.wcai.com

- FEBRUARY -
Gartner Wireless &
Mobile Summit
February 5-7
Dallas, Texas
www.gartner.com/2_events/conferences/ra10.jsp

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MarketPlace NEWS

**Schneider Electric To Buy APC**

IN A DEAL WORTH \$6.1 billion, France-based Schneider Electric plans to purchase American Power Conversion, a backup power equipment maker in Rhode Island. The selling price of \$31 per share is about 30% higher than the closing price on APC stock on Oct. 27, the Friday before the announcement. The takeover, slated to be completed in the first quarter next year, will integrate the data center power and cooling and infrastructure management aspects that APC specializes in with Schneider's MGE UPS Systems sector. The board of directors for APC has already approved the deal, but APC shareholders have yet to approve it.

Microsoft Reports Fiscal Q1 Earnings

BEATING ITS OWN FINANCIAL forecasts, Microsoft posted fiscal first-quarter net profit of \$3.48 billion, or 35 cents a share, which is up considerably from last year's \$3.14 billion, or 29 cents per share. The company's revenue for the quarter was \$10.81 billion, up from the year-ago revenue of \$9.74 billion. In June, Microsoft predicted that it would see revenue for the first fiscal quarter range from 30 to 32 cents per share, with the overall revenue ranging from \$10.6 billion to \$10.8 billion. Strong sales in new Microsoft products such as SQL Server and the Xbox 360 contributed to the better-than-expected figures for the quarter.

Sony Releases Battery Failure Details ...

SONY SAYS THAT METALLIC particles, likely nickel, were somehow accidentally inserted during production either when creating a groove in the battery case or when adding electrolyte to the cells. Those metallic particles are likely responsible for the 16 documented cases of batteries overheating or catching on fire and the resulting recall of about 9.6 million notebook battery packs. That number includes 6.1 million batteries being recalled by several notebook manufacturers and an additional 3.5 million batteries covered under a Sony replacement program. Gateway is the latest company to issue a battery recall, saying it will exchange batteries on an estimated 35,000 notebooks.

... & Vows To Stay In Battery Business

DESPITE A WIDESPREAD RECALL of its batteries expected to cost the company an estimated \$427 million, Sony says it plans to stay in the battery-making business. "The battery operation is a very important business for us," says Sony Executive Deputy President Yutaka Nakagawa. Because of the recall, Sony recently lowered its operating profit outlook by 62% and posted a quarterly loss of about \$175 million. Sony itself has recalled an estimated 250,000 batteries used in its Vaio products.

Release Of WinXP SP3 Delayed

USERS OF MICROSOFT'S Windows XP operating system have been waiting more than two years for a service pack update, and now they'll have to wait even longer. Microsoft has moved back the shipment date for Service Pack 3 for both WinXP Professional and Home editions to the first half of 2008. And even that date, according to the Microsoft Web site, "is preliminary."

The new SP3 is expected to include bug fixes, security patches, various updates, and a few new add-ons.

Data Breach Study Results Released

CUSTOMERS ARE LIKELY to forgive a company if a breach occurs that puts some of the customers' information at risk. Customers are less likely to stay with a company, however, if there is a security breach in a third-party vendor working for the original company. Those are among the findings released in the "2006 Cost of Data Breach Study" by the Ponemon Institute, a firm that studies government and business information and privacy management practices. Other findings show the average total recovery cost was \$140 per lost customer record and that the average total cost of a data breach was \$4.8 million.

AMD, Intel Announce Price Cuts

SIGNALING A DESIRE to lower inventories before releasing new chipsets, both Intel and AMD announced cuts in prices for many of their existing products. AMD dropped prices by as much as 35%, predominately on its notebook processors; Intel cut prices on fewer chips, mostly desktop processors, but the price decreases were similar in amount to AMD's. AMD also announced it will ship its 65nm chips this quarter. Both Intel and AMD have announced plans for quad core chips.

Zombies Still A Major Threat

ACCORDING TO DATA collected from Microsoft's Windows Malicious Software Removal Tool, in the first six months of this year, 4 million Windows computers were infected with malicious software. Of those infected PCs, about half of them had malicious remote control software. This is a decrease from the previous six months (the second half of 2005), when 68% of the infected PCs had a "backdoor Trojan." More than 43,000 new variants of malicious remote control software were detected in this year's first half, according to a recent Security Intelligence Report from Microsoft. In June, the software giant said the most prevailing threat to Windows PCs was zombies.

EPA Develops Server Energy Use Protocol

SERVER MANUFACTURERS will soon have a standard way to measure how much power their servers use. A server energy use protocol, which is initially being designed for 1U and 2U servers and requires testing

using transaction-based benchmarks under differing workloads, is being developed by the U.S. Environmental Protection Agency and several leading hardware vendors, including HP, Sun, and IBM. The goal is to provide server buyers with a better understanding of how server energy use compares among manufacturers. The EPA plans to use data from initial benchmarking to develop an Energy Star rating, which will require server manufacturers to meet certain energy usage requirements to earn the Energy Star rating on their products.

Vista RTM Pushed To Nov. 8

ALTHOUGH MICROSOFT'S new operating system Vista was scheduled to be released to manufacturing Oct. 25, an unexpected bug caused the Vista team to delay its RTM to Nov. 8 instead. The developers working on Vista originally discovered the bug Oct. 13, and it reportedly was serious enough that it would cause a system crash and could only be repaired by reinstalling the operating system. Although the Vista team took care of the problem within a week, it still delayed the OS' delivery by two weeks.

Cisco To Buy Orative

CISCO SYSTEMS ANNOUNCED plans to expand its unified communications portfolio by acquiring mobile software vendor Orative for \$31 million. Orative, which is a member of Cisco's Technology Developer Program, makes software that will allow companies to tie cellular phones to existing Cisco VoIP and unified communications deployments. The software is compatible with a variety of OSes, including BlackBerry, Java 2 Platform Micro, Symbian OS, and BREW. Cingular and Verizon Wireless are among the carriers that have certified the technology for use on their networks.

Investors Request Seats On Gateway Board

A GROUP OF INVESTORS made up of Firebrand Partners and Harbinger Capital Partners has requested that three representatives from Firebrand be given seats on Gateway's Board of Directors. The group would also like Gateway to remove obstacles to the potential sale of the company. In a letter to Gateway CEO Ed Coleman and Chairman Richard Snyder, Firebrand managing member Scott Galloway stated, "We are troubled that the board appears to lack the sense of urgency to address the company's challenges and capitalize on its opportunities."

WATCH THE STOCKS

This information provides a quick glimpse of current and historical stock prices and trends for 16 major companies in the technology market.

Company	Symbol	Year Ago	Oct. 23 \$	Oct. 30 \$	% change from previous week
Avaya	AV	\$11.63	\$11.84	\$12.68	▲ 7.09%
BEA Systems	BEAS	\$8.81	\$16.25	\$16.34	▲ 0.55%
Computer Associates	CA	\$28.47	\$24.91	\$24.74	▼ 0.68%
Cisco Systems	CSCO	\$17.10	\$24.43	\$23.90	▼ 2.17%
Dell	DELL	\$31.75	\$23.60	\$23.37	▼ 0.97%
Electronic Data Systems	EDS	\$21.63	\$24.43	\$25.13	▲ 2.87%
Google	GOOG	\$355.44	\$480.78	\$476.57	▼ 0.88%
HP	HPQ	\$26.96	\$39.87	\$38.92	▼ 2.38%
IBM	IBM	\$82.89	\$91.56	\$91.50	▼ 0.07%
Intel	INTC	\$23.07	\$21.45	\$21.26	▼ 0.89%
McAfee	MFE	\$31.60	\$27.14	\$29.05	▲ 7.04%
Microsoft	MSFT	\$25.11	\$28.45	\$28.53	▲ 0.28%
Oracle	ORCL	\$12.66	\$19.15	\$18.52	▼ 3.29%
Red Hat Software	RHAT	\$22.08	\$18.87	\$16.51	▼ 12.51%
Sun Microsystems	SUNW	\$3.92	\$5.20	\$5.55	▲ 6.73%
Symantec	SYMC	\$23.18	\$21	\$19.66	▼ 6.38%

NOTE: This information is meant for reference only and should not be used as a basis for buy/sell decisions.

BUYER'S GUIDE
MARKE  **WATCH**

Take A Look At Backup Utilities

Better Safe Than Sorry

by Sandra Kay Miller

I'M SORRY. IT'S GONE. Those gut-wrenching words that no one wants to hear when he's seeking the restoration of critical data—be it something as simple as a much-needed file, a copy of an old email, or worse, a customer database for the entire enterprise—are enough to drop anyone to his knees in frustration. And in today's regulatory environment, not backing up required data could result in fines reaching millions of dollars or worse, land you in jail.

Given the maturity of legacy backup systems (tape, disk, etc.) and the growing popularity of managed services, there are many options available to meet the backup requirements of everyone—SOHOs to large-scale enterprises with distributed environments—so no one will ever have to worry about experiencing the heart-stopping horror of lost data.

Overall, the backup and storage market has maintained upward growth, much of it attributed to regulatory compliance. According to research firm IDC, the market has increased steadily, with backup and archiving software alone accounting for a third of total revenues. Previous years have yielded double-digit positive gains with an overall increase of 16.1% from 2003 to 2004.

IDC analyst Laura DuBois also points out that last year there was 16.8% growth in backup and replication software specifically to mitigate data loss in the event of natural disasters as no doubt many organizations learned hard lessons after a record hurricane season in the southern United States.

DuBois says, "The market's drawn by compliance, by IT governance and increased focus in solutions to address natural and human disasters and to counter threats against any kind of attack."

Big Guns vs. Best-Of-Breed

EMC/Legato (software.emc.com), Symantec/Veritas (www.symantec.com), and IBM (www.ibm.com) provide the lion's share of enterprise-class backup utilities. Other top providers for backup applications include Network Appliance (www.netapp.com) and HP (www.hp.com).

However, many organizations opt for vendors offering point solutions. Dane Johnston, a consultant who has installed, configured, and maintained backup systems for small to midsized enterprises in the Mid-Atlantic region, discusses his customers' preferences for not using the "big

Buying Tips

Here are some ideas for what to look for when you're choosing a backup utility.

- Easy to install, configure, manage, and use
- Provides backup and restore support for multiple operating systems, computers, and devices from a centralized console
- The ability to customize backup schedules on a daily, weekly, and monthly basis, as well as by logical determination
- Be able to scale to meet backup requirements as your organization grows

five" vendors' backup utilities. "If Veritas users weren't Symantec shops, after the acquisition they felt pressured into switching. Others just don't feel they're big enough to warrant a backup solution from a major vendor," says Johnston.

There are advantages of choosing a best-of-breed backup solution over a comprehensive mega-vendor, the first being the vendor's dedication to its core technology. "After 9/11, disaster recovery became big business. Regulatory compliance has further fueled vendors to acquire bolt-on solutions so they can get on the DR and compliance bandwagons," says Johnston.

Innovation and bleeding-edge technologies are often represented in smaller, feature-specific companies. Due to their vast install base and potential customers, larger vendors may not go the extra mile to tailor a solution to fit a challenging deployment. Best-of-breed vendors can be extremely agile to meet the evolving needs of the market, having less corporate overhead and procedures to wade through in order to upgrade or react to changing technologies and regulations affecting the industry. The only drawback? Great point solutions are often targets of acquisition.

Here are some of the best-of-breed backup utilities available today. All of them support flexible environments and are highly scalable.

Total Control

Since 1975, B&L Associates has been building backup technologies. Its most recent product, Vertices, is a tape management software solution designed for man-



SNAPSHOT

B&L Associates Vertices

Starts at \$10,900

Tape management software for storing, moving, tracking, and securing data on all enterprise media

www.Processor.com/Vertices

aging multiple media in either a standalone posture or networked environment.

Vertices provides seamless control over storing, moving, tracking, and securing information in an open systems environment. That means it can handle all types of media, independent of platform or location. In today's global distributed environments bound by regulatory compliance, it's one thing to back up data, but users must also have the ability to both easily locate and access the data, too.

Advanced features include granular control over how long data is to be stored and where it resides throughout its life cycle. Security is also a key part of B&L's solution. In addition to two-tier protection—access restricted based upon users and functions—Vertices includes

purge protection, preventing live data from being overwritten.

Automation

Imagine being able to press a single button and have all your systems automatically failover to a parallel remote location in a matter of minutes. Sounds like a data center manager's dream, but with OneSwitch Enterprise Console from MessageOne, that level of backup has become a reality for servers for Exchange, SQL, IIS, BlackBerry, and many other Windows-based applications.

"With OneSwitch, you can go on to our Web console, select the affected servers, and in 15 minutes automatically fail all those applications over to a remote data center—simultaneously working in parallel and fully automated," says Paul D'Arcy, vice president of marketing at MessageOne.

As a fully automated managed service, OneSwitch does not require the extensive intervention of traditional backup utilities.

"When a problem occurs, you need to have an expert available 24/7 on your staff who is guiding that failover process and who is involved at many points to make sure it goes successfully. That person can typically handle one server at a time, meaning if you have to do failover on 100 servers, it could take a long time, be very complex, would require a lot of staff, and introduce the potential for human error,"

SNAPSHOT

MessageOne OneSwitch

Starts at \$900 per month

Automatically replicates application data in real-time to a local or remote backup system over a standard network connection for Windows applications

www.Processor.com/MessageOne3

explains D'Arcy. "We make the process very fast and remove the potential for human error. It automates all the work that an expert administrator would do in the event of a failover [for] those applications." All you need is someone to press the button.

Software, Service & Hybrid

While the lure of managed services for backup utilities is tempting, many organizations want to retain some, if not all, control over their data. EVault provides disk-based backup and recovery software, as well as managed services. To get the best of both worlds, organizations can choose to implement aspects of both, too.

The EVault InfoStage software delivers secure disk-to-disk backup with centralized management, extensive reporting, and tiered storage capabilities for Windows, Novell, Linux, Sun, IBM (AIX and iSeries), and HP-UX platforms. For more efficient backups, the EVault DeltaPro processing only changes data blocks in new or changed files.

For managed services of server, Exchange, and desktop backup and recovery, EVault offers online services that first encrypt data and then transfer it to a secured data center.

Depending on your organization's specific needs, you might choose a hybrid such as

SNAPSHOT

EVault InfoStage

Starts at \$12,000

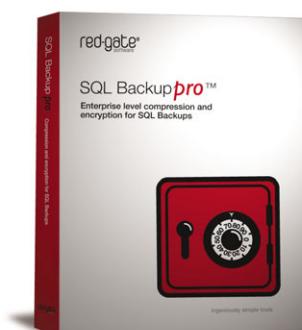
Software for automated disk-to-disk backup and recovery over the network to a remote or centralized storage server; also offers managed services and a hybrid of both solutions

www.Processor.com/EVault3

using EVault software to back up to one of its secured data centers or its online managed solution to send data to existing corporate distributed backup infrastructure.

Database Only

Database backup is critical; however, native SQL Server backups are basically a data dump, both highly inefficient and insecure. Red Gate Software focuses solely on



SNAPSHOT

Red Gate Software SQL Backup

\$695

A scalable, enterprise-class SQL backup tool with the power to securely access and manage all server backups remotely from a central, client-based interface

www.Processor.com/SQLBackup

Microsoft products—SQL and .NET—with an assortment of toolkits and utilities designed to rectify the shortcomings of the original application. SQL Backup supplies compression and encryption for SQL Server database backups, making them up to 10 times faster and extremely secure through either 128- or 256-bit encryption.

Administrators will enjoy the intuitive GUI through which they can easily set up advanced functions such as simultaneous mirrored backups to different locations and distributing backups across high-speed disk arrays. Offering even more control, Red Gate provides a command-line interface for SQL Backup.

Evolution

The next step is CDP (continuous data protection). In a literal sense, data isn't backed up but instead is captured and alternatively stored in real time to eliminate the gaps between traditional backups.

TimeData from TimeSpring offers CDP solutions for SQL, NTFS, SharePoint, and Exchange. But there is way more under the hood than just data assurance. Detailed change records, including meta data and

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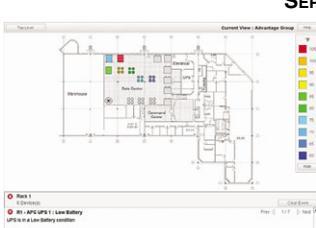
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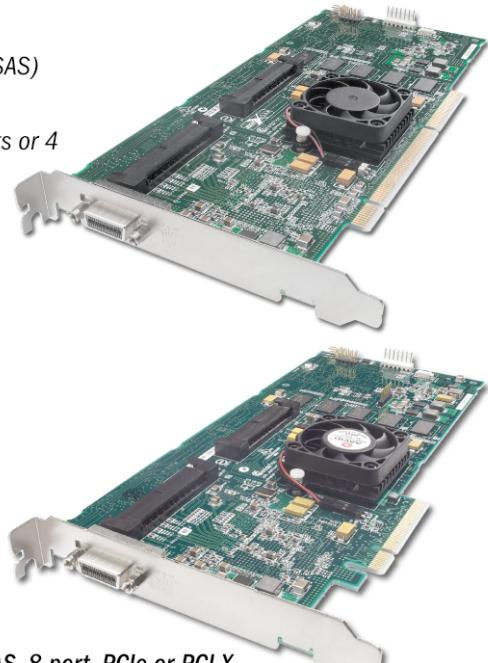
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The Murky Future Of Optical Discs

Whatever Happened To This Technology?

by Chris Jackson

WHEN OPTICAL DISC technology first came onto the computing scene in the early '80s, it offered a tremendous improvement over existing media storage systems. Durable storage with high transfer rates and high capacities was marketed by vendors seeking to capitalize on users' frustration with magnetic tape storage systems. Although CD and DVD have been unarguable successes for consumers, their enterprise counterparts have been largely relegated to niche markets.

Tape backup systems have consistently relied upon several features for success: low per-gigabyte cost, high storage capacity, and fast transfer rates. Tapes are bulky, however, and don't always function well in different devices. The life span of a tape was variable because the media was sensitive to heat and magnetism. A common adjective for tape in the 1980s and 1990s was "finicky."

Optical media promised to change all that. Optical discs were sexy, compact, portable across different systems, and most of all, were new. Whether it was recordable CDs, DVD, or magneto-optical systems, tape was out of fashion, and optical was the darling of the industry. But how did it make its move?

Two Shining Moments

The first arena that optical was successful in was replacing the ubiquitous floppy disk. Whether as a temporary storage device or as a means of distributing software, the floppy had long worn out its welcome. Here the storage capacity of CDs was several

magnitudes larger than floppy diskettes, in addition to being far more robust.

For software vendors, the cost savings were tremendous in both shipping and warehousing. System administrators also benefited, as long as their servers and workstations were equipped with the appropriate drives.

When rewriteable CD systems became affordable, the CD replaced the floppy as the primary media for "sneakernets." Burning a copy of data with a rewriteable CD and shipping it off to a partner was often faster than sending it across the Internet. This also allowed users to create ad-hoc backups of data that lived outside an enterprise's data retention systems.

With the introduction of the DVD, the same market penetration occurred as the increased storage capacity of DVDs dwarfed those of CDs. Initially DVDs were limited to distributing data until rewriteable drives became the norm.

Enterprise Backup

Although CDs and DVDs found useful niches in many companies, they posed no real challenge to tape for enterprise-grade backups. The media didn't fare well when used in jukebox systems that tried to mimic tape-changing libraries. In addition, competing optical technologies

hampered the introduction of both rewriteable CDs and DVDs. Some vendors used caddies to protect the media, while others saved costs by using bare discs.

CDs and DVDs weren't the only optical systems targeted at the enterprise. Magneto-optical systems were for a short time quite viable as storage systems, offering durable, compact media. Yet despite the hype and buzz, the tried-and-true tape technology still had some tricks up its sleeve.

Evaluating optical discs has to be done in parallel with the tape technology it was intended to replace. And unfortunately for the optical industry, not only were they competing directly with tape system vendors, they were also having to cope with tremendous increases in hard drive storage.



The state of tape drives in the early 1990s was quite robust. DDS tapes provided SMEs with up to 70GB of storage on small cassettes, and both Mammoth and Exabyte-type systems (www.exabyte.com) offered capacities that dwarfed any available optical systems. The main problem was the incredible proliferation of different formats, drives, and system integration. No one standard had dominated the market.

Here is where optical storage vendors hoped to capitalize on the perceived failings of tape media; although inferior in overall usage to tape, optical technology had the promise of being sexy and new. Surely it would surpass tape to become the predominant storage media. Or would it? Time would tell.

Fast Forward

For many systems administrators, 2006 is a time of plenty. Hard drive storage costs have dropped precipitously as drive vendors have rushed high-capacity drives to market.

With SATA drives rapidly approaching the 1TB mark, system storage is cheap. Yet this imposes challenges on backup systems.

Tape systems have advanced to where system administrators can store 800GB of compressed data per cassette, and tape libraries have made it feasible to back up multiterabyte systems.

What's missing from the equation is the use of any optical storage. Magneto-optical systems offer the highest capacity, but only at a paltry 30GB. The impending arrival of Blu-ray and HD-DVD offers potential improvements, but the proposed increases to 100GB and greater will be superseded by both tape and hard disk increases.

One area where optical media has succeeded is in archival storage. For enterprises that have strict regulation about WORM (write-once, read-many) archiving, magneto-optical systems have become de rigueur. Blu-ray-based UDO systems have increased the storage capacity but are competing with tape-based systems that comply with regulatory edicts while still storing the voluminous data being created by enterprises on a daily basis.

The Future

Although optical storage is currently lagging behind both disk and tape storage systems, there is hope on the horizon. Technologies such as InPhase Technologies' Tapestry holographic storage systems (www.inphase-technologies.com) have the potential to jump-start optical storage with capacities of up to 1.6TB and transfer rates of 120MBps. With initial drives starting at 300GB per disc and transfer rates of 20MBps, the Tapestry systems are competitive in performance with many enterprise tape systems. If InPhase can reduce system costs to align with tape systems, there may yet be life in optical storage.

Liz Murphy, InPhase's vice president of marketing, says InPhase expects Tapestry drives to cost \$15,000 to \$17,000 and 300GB discs approximately \$150. InPhase hopes to establish itself as a serious competitor to tape storage. And if it can deliver its second-generation (800GB, 80MBps due in 2008) and third-generation (1.6TB, 120MBps due in 2010) systems on time, holographic storage may turn the tables on tape.

In addition to InPhase, the HVD Alliance (www.hvd-alliance.org) is a consortium of manufacturers seeking to partner in the development and manufacturing of HVD technology. The primary coordinator of this alliance is Optware, a privately held Japanese company focusing on both HVD and HVC (holographic versatile card) technology. □

Optical Technologies

Name	Introduced	Capacity	Key Features
CD-ROM	1985	700MB	Inexpensive, ubiquitous support
Magneto-optical	1987	30GB	WORM support
DVD-ROM	1996	8.5GB	Inexpensive, high capacity
Blu-ray	2005	30GB	Potential for high capacity
HD-DVD	2005	25GB	Competitor to Blu-ray
HVD	2005	300GB	Holographic storage

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What's New In Storage?

Continued from Page 1

"We see iSCSI being a new technology that could benefit the SMB sector the most," says Daniel Tai, CTO at Enhance Technology (www.enhance-tech.com). "Being a centralized storage, iSCSI allows data and storage to be stored and managed remotely and expand over the network. IP SANs benefit SMBs by offering significant cost reduction when compared to Fibre SAN, while offering great speed advantages over NAS storage solutions."

Moving To Disk

Although magnetic tape remains the backup medium of choice for many SMEs, disk backup is quickly making inroads into these enterprises thanks to a wealth of benefits not shared by tape. Although tape is certainly cheap, it's also fragile, frequently falling prey to environmental conditions that can cause the medium to lose tension. Factors such as these lead to failed tape restorations, an occurrence that obviously defeats the purpose of using the medium for backups.

Disk-based technologies, on the other hand, aren't as liable to break and can withstand more frequent use. Further, disk backups provide a more extensive set of management options that allow administrators to fine-tune both backups and restorations. For example, the Active Archive Appliance from PowerFile (powerfile.com) lets companies access files—including infrequently accessed files—in seconds because the archived data remains accessible over the network. This appliance operates as a standard network share, so it can interact with existing information life cycle management tools in an enterprise's environment.

Nonetheless, disk backup doesn't appear to be replacing tape anytime soon. "Tape will continue to remain the backup of

companies' DPR [digital preservation repository] strategies, but disk-to-disk, VTL [virtual tape library], and long-distance replication are replacing tape for business-critical and business-essential data," says Chris Hyne, vice president of marketing at Topio (www.topio.com).

It's In The Tiers

SMEs aren't particularly fond of introducing complexity into their IT environments, but tiered storage is an increasingly popular movement that's tough to ignore. This technology is based on the premise that different types of storage can be used effectively to handle separate categories of data, assuming those categories differ when considering security, performance, and usage requirements. Moving forward, the key to successful implementation of tiered storage could depend on its ability to remain transparent.

"Customers realize that data growth will continue to increase well beyond what they can handle or afford, so increasing the storage efficiency and improved life cycle management of data is a hot topic," says Ron Totah, director of technical marketing at BlueArc (www.bluearc.com). "However, what we have seen is solutions that are disruptive to end users limit or prevent the deployment, so transparency is key. End users must continue to see their files and data in the same location, while providing the flexibility to the administrator to age data off to lower-cost storage or locations transparently."

Moving to tiered storage remains a challenge dependent on the size of the company: the larger the company, the more difficult the task of classifying the data. However, when the data is successfully classified and deployed on the varied media types, companies can begin to enjoy the

Processor.com

benefits of having important or frequently used files on more expensive, higher-performance media and less important or less frequently accessed files on cheaper media.

Turning Virtual

For companies unwilling to abandon tape backup but seeking the speed and reliability of disk backup, VTLs are becoming increasingly attractive. Although VTLs are disk-based storage systems, they integrate seamlessly with existing tape backup environments so admins can continue using tape for offsite storage. For in-house storage, VTLs can appear as a tape library to backup applications, so existing backup environments won't experience much of a clash from the disparate technologies.

"Virtual tape libraries are now becoming the thing to watch," Clark says. "Realize that VTLs are being deployed as a primary target for backups and a source for recovery."

NetApp (www.netapp.com) released three new VTL products last month, the NearStore VTL300, VTL700, and VTL1400. According to the company, these products can double to triple the amount of backup data stored on disk while delivering the performance required by data centers. This performance is due in part to high-speed hardware compression and self-tuning technology that keeps an eye on data loads and automatically assigns backup streams to the most available disks.

Gaining Control

Because data storage requirements continue to balloon, manufacturers are finding ways to incorporate innovative technologies into products that SMEs can afford and can integrate into existing architectures.

"We have been seeing more and more customers trying to drive towards consolidation and centralization of their storage infrastructure," BlueArc's Totah says. "Just as in the past where customers' server and direct-attached storage infrastructures were

A Look Ahead

For the future of storage, it's easy to envision high-performance, high-cost technologies that could eventually replace existing products. But small to midsized enterprises are looking ahead to find ways to increase performance while cutting costs.

"A technology that will have a significant impact on storage affordability, but is not itself a standalone product, is redundant data elimination technology," says James Damoulakis, CTO of GlassHouse (www.glasshouse.com). "This is already being used in a few backup, archiving, and VTL [virtual tape library] products, and it can turn the TCO of disk vs. tape upside down."

RDE (redundant data elimination) allows more data to be stored while less space is consumed, and because smaller amounts of data are more frequently transferred, there's less network traffic and overhead. Redundant data can drive up not only capacity requirements but also storage management requirements and administration overhead, so RDE can handle problems that current technologies can't easily solve.

Instead of storing multiple instances of files or data blocks, RDE engines can identify specific characteristics of data so only single instances of those files or blocks can be stored.

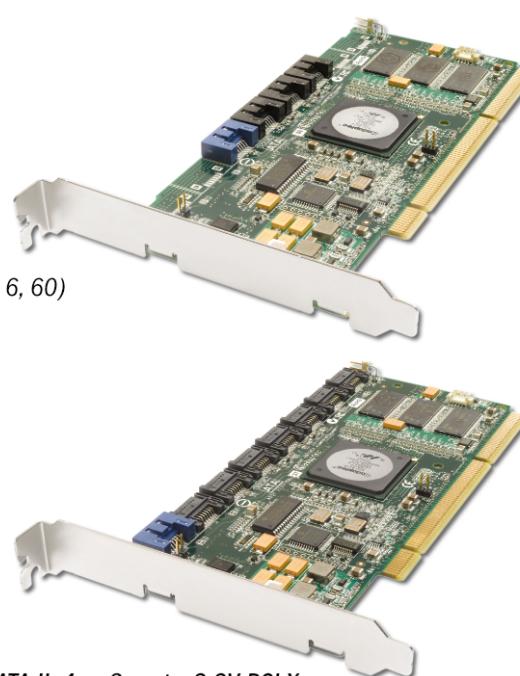
Products offering RDE are already emerging, including FalconStor Software's Single Instance Repository (www.falconstor.com), a deduplication storage software service.

out of control, they are now dealing with islands of SAN and NAS. They are looking for more scalable solutions that can handle the performance of all their aggregated applications to simplify management and gain control of spiraling costs." □

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Are Your Backups All Mixed Up?

SMEs Don't Have To Put Up With This Much Confusion

by Chris A. MacKinnon

IN BUSINESS, PAPER TRAILS can be nothing but tribulation. In a small to medium-sized enterprise, backups can be just as horrifying, especially when you mix the environment up. Throw DAS, NAS, and SAN in the same pot, and things can get messy. Mixed environments create havoc when it comes to backups because most affordable backup applications always seem tuned to one environment or the other. So unless SMEs put up with the hassle of two entirely different systems and doubling up hardware, too, in most cases they're pretty much guaranteed of having half of their backups and restores perform poorly.

Joseph Billings, executive vice president of WideBand (www.wband.com), says almost no backup software option runs on every operating system or in every hardware environment. In addition, he says, many SMEs have multiple backup hardware devices to deal with, each inadequate when it comes to backing up the entire network. "There is no easy answer to this problem," Billings says, "but applying some guidelines and best practices can greatly lessen the burden."

Billings cautions, however, not to put all your eggs in one basket. He says, "Focusing on one system might be fine if

you do not care about everything else. In most cases, putting all your resources into one system will leave you very vulnerable. Many SMEs do not have a complete backup solution for any part of their network, relying on RAID 5 or CD copies as their only protection against data loss due to disaster or failure. If mission-critical data is involved, every complete backup solution should include offsite backup."

The Options

There are products available, such as Veritas NetBackup (www.veritas.com), that can handle mixed environments, but the costs are incredible. So what are an SME's affordable backup and restore options in mixed environments? Jim McDonald, chief technology officer for WysDM Software (www.wysdm.com), says there are some good solutions on the market, but he says it is naïve to think that all data should be protected in the same way. "Some combination

of tape, disk-based nightly backup, and snapshot/replication will generally need to be used," he says.

Billings says most software packages allow backups to be routed to a network drive. He says, "More and more SMEs are turning toward backing up to a central network device with redundancy and offsite backup built in. Another option is to 'bite the bullet' and budget for moving to a more

standardized architecture. Though this may be out of the question in some environments, SMEs should seriously consider the options and look at the costs and risks associated with trying to maintain the existing mixed network."

McDonald says the important thing to realize is that the days of "one size fits all" data protection have ended.

"The reality," he says, "is that companies (SME or otherwise) need a variety of approaches depending upon the desired service level. The most basic type of service level concerns recovery time. So for example, it might be totally appropriate for an SME to utilize Symantec Backup Exec [www.symantec.com] to write 80% of their data to tape each night. However, the most critical data might need to be protected via snapshot technology from NetApp [www.netapp.com] (just to pick two of the leading vendors in the space)."

McDonald says there might even be a different strategy entirely for some parts of the environment (for example, Exchange). The key, he says, is to realize that no one vendor will cover the gamut. "What is needed is management. Well-run enterprises will pick the

right solution for each application (up to a point—no one is suggesting having more data protection solutions than is necessary) and then use a DPM (data protection management) solution to provide unified management, service-level enforcement, monitoring, reporting, and analysis." McDonald says this provides the best of both worlds in that best-of-breed solutions typically offer

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Continued from Page 1

requiring distinct policies and enhanced, automated enforcement.

Tips & Strategies

In light of the threats and risks most acute for roving workers, the experts' tips for enhancing mobile security fall into a few key areas.

PROTECT DATA

TIP 1 **Don't store sensitive data on portable devices without some form of strong encryption.** We are all familiar with recent high-profile security blunders—think the U.S. Department of Veterans Affairs or Fidelity Investments—involved in the loss of a notebook PC with a database full of sensitive customer information. (See the Privacy Rights Clearing House Web site [www.privacyrights.org] for an eye-opening list of data breaches.)

Don't let your company be the next one dealing with a legal and public relations fiasco. Ideally, employees wouldn't store any sensitive data on a mobile device, according to Mathias—in fact, he's a big fan of the thin client usage model and feels there are some security advantages to using a smartphone/PDA with limited local storage over a laptop. If you need local storage, make sure it is strongly encrypted, preferably with a hardware crypto device. (See the "Simple Ways To Secure Data & Authentication" sidebar for product options.)

SECURE NETWORKS

TIP 2 **Make sure all remote access connections to internal**

networks are encrypted via a VPN with strong authentication. Remote access to internal data and applications is a necessity for road warriors; however, exposing your networks to external access requires caution and vigilance. There are many secure VPN schemes currently available, including IPSec, L2TP (Layer 2 Tunneling Protocol), and SSL (Secure Sockets Layer) tunnels, that can be easily implemented using hardware devices marketed by a plethora of vendors. Managed remote access services are another option for those who don't want the bother of another system to administer.

According to Rob Robinson, senior sales director for D-Link (www.dlink.com), the price of VPN hardware has plummeted, with appliances targeted at the SOHO market, such as D-Link's new SECURESPOT, breaking the \$100 mark. Between aggressive hardware pricing and availability of robust third-party services such as Route 1's MobiNET (www.route1.com), VPNs are accessible to any organization. Given the unencumbered internal access VPNs allow, they should be protected with strong TFA (two-factor authentication) such as a USB token or biometrics.

TIP 3 **Secure all wireless access points connected to internal networks with Layer 2 encryption (for example, WPA or WPA2 [802.11i]).** If you provide wireless network access within your building, make sure that access points are protected with WPA (Wi-Fi Protected Access) or WPA2. D-Link's Robinson notes that all of its wireless products have incorporated these security standards for years, so if you have older hardware that uses the now-obsolete WEP (Wired Equivalent Privacy) standard, now is probably a good time to upgrade.

He notes that WPA-Personal, which uses a preshared key and passcode, is "good enough in most cases," but if you are especially security-conscious, opt for user-based authentication using a RADIUS server. For the ultimate in wireless security, combine WPA and a VPN by placing wireless access points on an external network without direct access to the intranet (a DMZ, or demilitarized zone), using a VPN to gain internal access.

TIP 4 **Consider NAC (Network Access/Admission Control) solutions for enforcing device or endpoint security policy prior to connection to internal networks.** Even if you have secured remote connections for mobile devices, there is always the chance that they have become contaminated with a virus, rootkit, or other form of malware while on untrusted networks. Such infected systems can easily spread their pernicious payload to vulnerable internal systems once connected via VPN.

NAC solutions enforce client security policies by performing software scans for various malware and ensure that all clients have approved and updated defenses, such as antivirus, antispyware, and firewall, installed and running prior to being connected to an internal network. Tony Brockman, product marketing manager at Symantec (www.symantec.com), says, "Most current NAC offerings are too difficult for the SME." However, some solutions, such as StillSecure's Safe Access (www.stillsecure.com) or Symantec's On-Demand Protection Solution, don't require any client software (so-called agentless solutions), greatly simplifying deployment and administration.

SECURE DEVICES

TIP 5 **Use strong authentication for access control to all portable devices.** Even if you have established procedures to ensure that all data on portable devices is strongly encrypted, there is always the chance users have left some valuable nuggets unprotected on a laptop. As Farpoint's Mathias notes, with security, "the biggest problem is human error." Protect against unintentional data loss by ensuring that all portable devices, including phones, are password-protected. D-Link's Robinson adds that at a minimum you should use a strong Windows password

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Positive Networks PositivePRO	Makes it possible to offer users a complete LAN extension to the corporate network while ensuring that every remotely connected computer is secure and locked down to corporate standards www.Processor.com/PositiveNetworks

with aging, but ideally, use hardware- or biometric-based TFA.

The Evolving Threat

Farpoint's Mathias has two general rules for data security, which are particularly apropos for a mobile workforce: "Encrypt sensitive data wherever it's stored and whenever it's moved" and authenticate all access to this secured data. Implementing the strategies outlined above should provide ample protection for most organizations. However, security isn't a set and forget proposition—as Mathias notes, "the price of security is eternal vigilance"—threats are constantly evolving, and new software often opens up new vulnerabilities. Consider it job security. □

Simple Ways To Secure Data & Authentication

Invest in a "smart," multipurpose USB security device such as those from MXI Security (www.mxisecurity.com), Route 1 (www.route1.com), or Spyros (www.spyros.com). These devices provide hardware-based data encryption and store private keys for two-factor authentication that can be integrated with Windows logon or most VPN solutions, including managed remote access services such as

Route 1's MobiNET. Most support multiple crypto certificates for different login accounts (very handy for consultants who may need VPN access to several customers' networks) and have multiple secured data partitions, each encrypted with a different key. Some, such as the Stealth MXP, also incorporate fingerprint scanners for biometric authentication to stored crypto keys.

Are Your Backups All Mixed Up?

Continued from Page 11
maximum functionality at minimum cost. He says DPM reduces the risk and the human cost of using multiple solutions.

A Good Approach

Billings says WideBand developed the fs[ix] Gold Server (a network storage

solution) because it can be mapped as a network drive from almost any operating system, and it has the backups built in. The Gold Server consists of two boxes, a master and a mirror. Both boxes connect to the network, and if anything fails on one box, it automatically falls over to the other. WideBand's solution also includes

an optional built-in offsite backup service that automatically sends only the changes over the Internet connection at night.

Billings adds, "By mapping data backups to a device like the Gold Server, SMEs are able to back up from multiple environments while still centralizing their efforts and budget. Since the many databases and critical files can be moved directly onto a Gold Server, this option also gives an upgrade path for SMEs to start centralizing their data, as well."

McDonald says SMEs rarely have the opportunity to mix backup environments because of management complexity and limited IT resources. He says, "With comprehensive backup management tools, SMEs are no longer held hostage to a single vendor and can add backup infrastructure from any vendor, based on their business requirements. Data protection management tools take the headache out of managing a mixed environment." McDonald says such tools eliminate the question of "Why did my backup fail?" into a self-healing approach of identifying bottlenecks and taking action before a backup fails and optimizing the environment.

There is always the option of outsourcing your backups. Many SMEs consider backing up their data as a necessary evil, but there are many companies touting backup services

Backup Options

ARAID 1500

www.accordance.com

The ARAID 1500 is an IDE/SATA dual-mode RAID storage subsystem made by Accordance USA. This is a disk mirroring unit, where if one disk fails, the remaining good drive takes over and serves you 100% of your data. The subsystem includes a hotswap capability, allowing hard drive replacement and rebuilding without rebooting. The ARAID 1500 supports all popular operating platforms including Windows, Linux, and Mac.

BizGuardian

www.breecehill.com

The BizGuardian, made by Breece Hill, is a network data protection appliance for small to mid-sized enterprises. The BizGuardian solution includes backup and recovery software and provides fast server protection. The BizGuardian is

a D2D2T (disk-to-disk-to-tape) appliance that mixes hardware and software into a package that is easy to own, operate, and manage.

The fs[ix] Gold Server

www.wband.com

One option for SMEs looking to make their backup life easier is WideBand's fs[ix] (pronounced "physics") Gold Server. The Gold Server is a network storage solution suited for SMEs that depend on their mission-critical networks by using redundancy and mirroring (two servers in one). The Gold server also supports automatic rollover and restore. The Gold Server includes an optional Offsite Backup Service, a Gold Support Program (including remote network monitoring), and the nPX Programming Tool (a database programming tool for Web programmers).

that will gladly take away your backup blues (at a cost, mind you). This eliminates the mixed environment predicament altogether—at least the predicament of your company having to manage the backups if a mixed environment is completely unavoidable. □

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Contrast Ratio	500:1	500:1	400:1	400:1	600:1	600:1
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Brightness (cd/m ²)	250 (Typ.)	250 (Typ.)	280 (Typ.)	280 (Typ.)	250 (Typ.)	250 (Typ.)
Input Signal	RGB Analog	RGB Analog	RGB Analog	RGB Analog	4 replaceable CCFLs edge-light(top/Bottom)	4 replaceable CCFLs edge-light(top/Bottom)
Viewing Angle	- 65° ~ 65°, - 55° ~ 65°	- 65° ~ 65°, - 55° ~ 65°	-70° ~ 70°, - 60° ~ 60°	-70° ~ 70°, - 60° ~ 60°	- 85° ~ 85°, - 85° ~ 85°	- 85° ~ 85°, - 85° ~ 85°
I/O	Power: 12DV adapter Keyboard: PS/2 Mouse: PS/2 VGA: 15-pin D-Sub					
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Power Consumption	33 Watts	33 Watts	38 Watts	38 Watts	44 Watts	44 Watts
Power Supply	AC 100-240V Universal					
Hot Key Control	OSD Hot Key					
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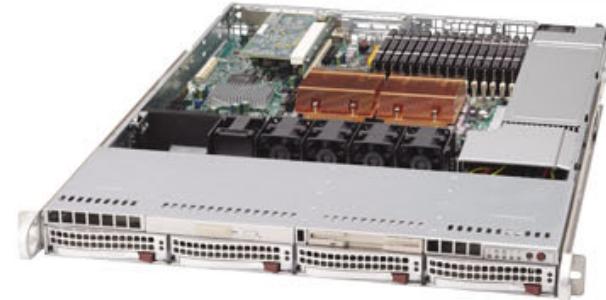
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Product Releases

PHYSICAL

Racks & Furniture

■ **GizMac** has launched a new server rack-mount cabinet that eliminates much of the noise associated with typical rackmount systems. The 25U XRackPro2 cabinet is designed for work areas in which low noise levels are ideal. Both the front and rear doors lock to prevent tampering. The cabinet also has preinstalled caster wheels so that installed equipment can be easily relocated. The 25U XRackPro2 rackmount cabinet costs \$2,199.99.

COMMUNICATIONS

Content Networking

■ **Citrix** launched the Global Load Balancing for Presentation Server platform, which is designed to improve application delivery and business continuity for medium-sized to large organizations. The new offering utilizes Citrix NetScaler technology to provide uninterrupted access to Web applications across local and remote Citrix Presentation Server installations. The Citrix Global Load Balancing for Presentation Server platform is currently available for \$27,499 and ships with Citrix NetScaler Application Switch Standard Edition and a NetScaler 7000 appliance with the NetScaler GLB module.

Security

■ **CP Secure** introduced the Content Security Gateway 110 to meet the Web and email security needs of small to medium-sized businesses and branch offices. The CSG 110 employs dual Kaspersky scan engines; real-time Web-scanning technology; and HTTP, HTTPS, FTP, SMTP, POP3, and IMAP protection to block spyware, viruses, and malware from entering the network and spreading. Each CSG 110 appliance is capable of protection for up to 100 network users.

.....

■ **Crossroads Systems** released the Strong-Box DBProtector database security appliance, for medium-sized to large enterprises that use Oracle Database 10g. The Strong-Box DBProtector lets administrators deploy policy-based intrusion detection, prevention, and compliance auditing. Capabilities include database activity inspection, security policy enforcement, suspicious activity alerts, real-time prevention, and audit trail capture.

.....

■ **IronPort Systems** and **Webroot Software** announced the S-Series Web Security Appliance with integrated Webroot RockSafe E1000 SDK software to protect networks from spyware and malware. The Ironport S-Series Web Security Appliance combines a Web proxy with

application layer analysis and a wire-speed Layer 4 Traffic Monitor to deliver fast and comprehensive network protection. The integrated Webroot SDK software uses a spyware definition database to stop spyware at the network perimeter. The combination of the IronPort S-Series Web Security Appliance and Webroot RockSafe E1000 SDK allows for a broad range of malware and spyware protection.

Switch

■ **Lantech's** X-Ring autorecovery protocol now comes standard on the company's industrial Ethernet switches. X-Ring can automatically recover switches from network connection failures in less than 300ms, Lantech says. The protocol uses a Coupling Ring function for redundancy between ring groups and Dual Homing for connection failover protection between ring groups and upper-level switches.

Telephony

■ **Cisco** unveiled its TelePresence Meeting platform, a remote communications service designed for Internet Protocol Next-Generation networks. The service provider **AT&T** is working closely with Cisco to ensure interoperability and provide additional video communication offerings, TelePresence services, managed unified communications, and application-aware network services.

.....

■ **Polycom** announced the availability of the Polycom HDX 9000 series and the Polycom Practitioner Cart HD for healthcare and medical applications. The Polycom HDX products deliver HD (high-definition) voice, video, and content sharing. The Polycom UltimateHD architecture forms the basis for the Polycom HDX solutions. System capabilities of the Polycom HDX 9000 series include true HD video resolution, the ability to deliver HD multimedia content, crystal-clear Siren 22 StereoSurround audio, new advanced HD videoconferencing camera, flexibility for systems integrators, and conference phone integration with Polycom's upcoming VoIP conference phone. The Polycom HDX Series and Polycom EagleEye HD Camera are currently available for order. The Polycom Practitioner Cart HD will be available next month.

Polycom also announced MGC/MGC+ Release 8, with enhancements to its line of MGC/MGC+ unified conferencing bridges (voice, video, and content collaboration). New features include expanded on-demand conferencing capabilities, easier conference initiation and access from inside and outside the organization, simpler and more efficient use of videoconferencing for users, reduced management requirements for system administrators, and enhanced

Go to Page 17

Keeping Tabs On Log Files

New Event Archiver Simplifies Managing Server Event Logs

by Scott Koegler

• • •

DORIAN SOFTWARE'S Event Archiver is not only a timesaver for administrators, but it enhances the ability to comply with a variety of regulations more effectively. The company's newest version, Event Archiver 6, includes several enhancements that make the product desirable in any size enterprise that needs to collect and analyze system event log files.

Dorian Software describes its Event Archiver 6 as a unique product that focuses on collecting and managing event logs from an organization's servers, as differentiated from more general-purpose applications that

SNAPSHOT

Dorian Software Event Archiver 6

Starting at \$89.99 for a one-server license

An affordable and manageable application, offering remote log collection and management with a consolidated management console

www.Processor.com/Dorian

may collect logs only as a function within a larger set of applications. Because of its single focus, Event Archiver 6 is available at a comparatively low \$89.99 for a one-server license and provides advanced functionality

beyond more general-purpose applications. Competitive applications include GFI's LANguard Security Event Log Monitor (www.gfi.com), TNT Software's Event Log Monitor (tntsoftware.com), and Quest Software's InTrust (www.quest.com).

Event Archiver 6 provides a centralized management console from which all active servers can be configured. Event logs can be imported into Microsoft Access or SQL databases on predefined schedules. Event Archiver includes a variety of predefined filters that can be used to exclude specific event types based on the needs of the enterprise.

Scott Wilson, infrastructure architect with SEI Investments (www.seic.com), uses Event Archiver's features in 2,000 servers, an environment growing by about 200 servers each year. According to Wilson, "Event Archiver is a part of every server we deploy. We use it to collect and manage the log files on each server. In addition to providing a useful piece of software, Dorian Software is a great partner."

They helped us to build a routine that bundles the various log files, so they can be collected on our centralized repository."

SEI's use of Event Archiver is unique in that it uses only a few features of the product, but as Wilson points out, "We would have had to create customized programming to accomplish what Event Archiver does for us right out of the box."

Greg Banfield, information systems security manager with Honeywell, uses Event Archiver in conjunction with Dorian Software's Event Analyst software. Because of the company's Department of Defense compliance requirements, Banfield is required to perform a weekly audit of all the company's workstations and servers. "We have to archive 95% of our systems' event logs for one year, and for some of those systems, we are required to maintain logs for five years," he says. "Event Archiver has become my best friend because I'm able to perform the weekly audits in a timely manner, and all from a single workstation." □

Event Archiver provides advanced functionality beyond more general-purpose applications.

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Product Releases

Continued from Page 16

security for government networks with FIPS 140-2 (Federal Information Processing Standards Publications 140-2). The MGC/MGC+ Release 8 supports the Polycom RSS 2000 HD Recording and Streaming server, high-fidelity HD Voice with the SoundStation VTX 1000, and the new Polycom HDX 9000 series of HD video collaboration systems. The Polycom MGC Release 8 is available at no cost for MGC customers on a maintenance contract.

Polycom also introduced a complete HD communications and collaboration architecture known as UltimateHD. Unlike other high-definition solutions, the UltimateHD architecture enables a total high-definition solution for every aspect of the experience affected by high definition: HD video, voice, multimedia content, bridging, and recording/archiving/streaming and supporting HD services.

• • •

■ **Sonus Networks and Cantata Technology** have partnered to provide a framework for the development and delivery of IMS-ready applications and services. Through the partnership, Cantata's SnowShore IP Media Server is now integrated with Sonus' IMS-ready architecture. The companies say the partnership will let network operators accelerate the delivery of new

services to market and build a foundation for developing and delivering SIP- and vXML-based applications through scripting capabilities and multimedia processing.

END NODES

Printer

■ **Kyocera Mita** announced the availability of two new security solutions: the IB-23 Secure Network Interface Card and the KX Driver Security Watermark Plug-in. The IB-23 is an internal network interface card that enables Kyocera printers and multifunctional products to communicate over an Ethernet network with a variety of operating systems, including Windows, NetWare, Mac, and Unix. Kyocera's KX Driver Security Watermark, designed for Windows printing environments using PCL XL and 600dpi resolution, lets users place a custom security watermark on any document when printing.

• • •

■ **Lexmark** introduced the Lexmark E series, Lexmark's first monochrome laser printer series to combine new print head technology, an Instant Warm-up fuser, and two-sided printing on every model. The Lexmark E250d prints at speeds of up to 30ppm and offers two-sided printing for \$199. The Lexmark E250dn has networking functionality for \$249. The Lexmark E350d

features an LCD and produces up to 35ppm for \$349. For workgroups, the Lexmark E352dn includes networking for \$449. The Lexmark E450dn costs \$599 and adds a GUI and enhanced security features.

Lexmark also introduced the new Lexmark C530 color laser printer series. The Lexmark C530 series prints up to 22ppm in color and up to 24ppm in monochrome. At \$499, the Lexmark C530dn is ideal for small businesses that want affordable, two-sided color printing capabilities. Also available for \$499, the Lexmark C532n offers one-sided printing and adds more paper handling and more cartridge options. The Lexmark C532dn combines the power of the Lexmark C532n with two-sided printing for \$699. The Lexmark C534n, C534dn, and C534dt feature robust memory and high supplies yields, along with a USB port for direct printing on the operator panel. The Lexmark C534n has networking functionality for \$699. The Lexmark C534dn adds two-sided printing capabilities for \$999, and the Lexmark C534dt includes an extra 550-sheet drawer for \$1,299.

Scanners

■ **Canon** introduced the DR-4010C scanner that can provide color scanning up to 40ppm and 80ipm (images per minute). New features include black-and-white contrast enhancement, ID card scanning using Straight Path feed capabilities, three-dimensional color correction, text orientation recognition, and automatic paper size detection. The DR-4010C also includes Canon's new Advanced Text Enhancement technology and the new Auto Color Detection driver to optimize data-capture. The DR-4010C will be available in January.

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CORRECTION

In the "Dependable Storage Appliances" article on page 17 of the Oct. 27 issue, the SnapShot sidebar should have listed the product as the **American Megatrends StorTrends iTX 2.6**.

Sources at AMI have informed us the prices should be \$4,949 MSRP for the StorTrends 1100i and \$19,799 MSRP for the StorTrends 3100i.

These sources also informed us that the StorTrends 1100i has a single power supply and uses AMI Advanced Software RAID, and not a hardware RAID controller.

Enterprise Applications Go Mobile

Sybase Unwired Accelerator 8.0 Provides Access To Applications On Any Mobile Device

by Tony Bradley

• • •

THE MARKETPLACE today demands that employees have access to the applications and data they need virtually anywhere and anytime. Personnel, particularly the sales force, who spend their time traveling across the country or around the world have to be able to conduct business on-the-fly or risk losing business and having customers fall through the cracks.

One problem facing enterprises that want to extend their applications to mobile devices

is the lack of any uniform standard for mobile devices. Some companies do have a preferred platform, such as BlackBerry handhelds, but often there are as many rogue devices as there are standard ones. Deploying applications from varying backend server platforms to diverse mobile devices is a complex, time-consuming process.

As mobile devices have increased in power, connectivity, and storage capacity, products such as PointSync from Mobile Data Force (www.mobiledataforce.com), Unwired Accelerator from Sybase (www.sybase.com), and MobiForms Developer from MobiForms (www.mobiforms.com) have raced to help companies extend their networks to these devices. Sybase created Unwired Accelerator 8.0 to help companies get their enterprise and legacy applications deployed to a diverse base of mobile devices more quickly.

.sybase.com), and MobiForms Developer from MobiForms (www.mobiforms.com) have raced to help companies extend their networks to these devices. Sybase created Unwired Accelerator 8.0 to help companies get their enterprise and legacy applications deployed to a diverse base of mobile devices more quickly.

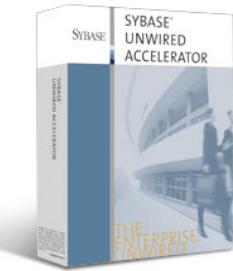
Neil McGovern, director of unwired products at Sybase, says, "What differentiates Sybase is the breadth of the platform (multiple apps, multiple devices, multiple architectures), our rapid development tools, and our speed of implementation (days not months), as well as our content capture and natural language search patented technologies."

Unwired Accelerator is built based on open standards and mature, scalable technology. The application supports a variety of mobile device platforms including Windows Mobile, BlackBerry, and Java ME, among others. It also provides integration with an array of backend services such as database, Web services, XML, static documents, and more.

The Unwired Accelerator development tools allow companies to quickly extend access to their enterprise or legacy application to their mobile workforce. Security is also an integral part of the Unwired Accelerator product, with the capacity to perform LDAP/AD authentication or role-based

authorization and support for encrypted communication via SSL (Secure Sockets Layer) or HTTPS.

Today's cell phones and other mobile devices are almost the equivalent of having a small laptop computer in your pocket. Using tools such as Unwired Accelerator 8.0, companies can leverage that compact power and wirelessly extend the network to allow employees to use applications and gain access to the data they need no matter where they are. □



SNAPSHOT

Sybase Unwired Accelerator 8.0

Starts at \$299 per user

Allows you to extend enterprise applications to mobile devices in days rather than months

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STORAGE

OCTOBER 13, 2006

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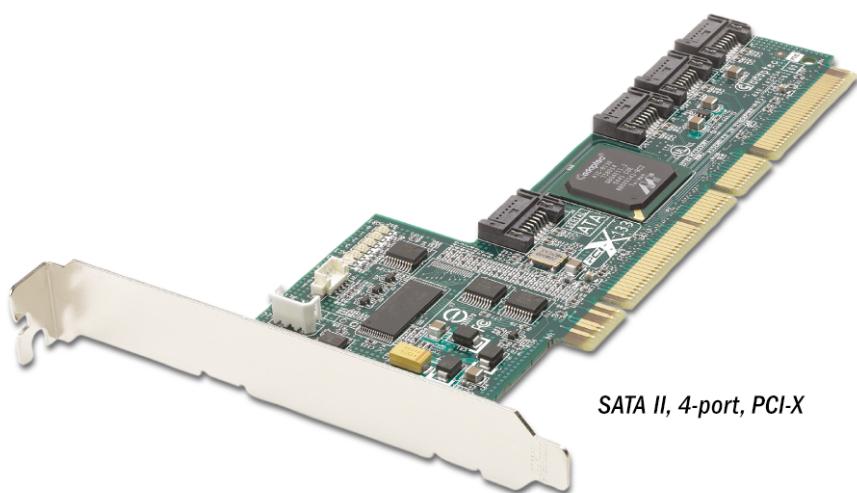
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EnhanceRAID 2U 6-Drive

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Product Releases

Continued from Page 17

■ **Fujitsu** has announced the fi-4860C2 VRS scanner, which includes Kofax VRS 4.1 Professional image-enhancement software, Adrenaline 650i SCSI interface boards, and a SCSI cable. The scanner provides advanced color detection and saturation. Through Advanced Clarity, the product offers new image quality options and better document processing tools. The scanner has a 500-page ADF for documents from 3 x 3 inches to 11 x 17 inches. The fi-4860C2 VRS has dual color CCD arrays for scanning both sides of a page in a single pass. The scanner supports 63ppm scans and 125ipm at 200dpi in color, grayscale, and monochrome. Prices start at \$17,995.

Server

■ **Dell** announced the availability of two new servers, both using AMD Opteron processors, as part of its PowerEdge line. The units include the 6950 and SC1435. Both servers are being released with the integration of Dell OpenManage and Oracle Enterprise Manager. The 6950 is a four-socket server and is being billed as consuming up to 20% less power than previous-generation four-socket PowerEdge servers. The SC1435 is a two-socket, rack-dense server that Dell says can offer up to 128% performance gains and up to 138% performance-per-watt improvements. The 6950 is priced at \$6,499 and the SC1435 at \$1,299.

■ The PANTAmatrix from **PANTA Systems** is a scalable x86 blade server platform with dynamic configurability, PANTA Systems says. It's designed to provide fast I/O performance to eliminate data handling bottlenecks around multicore Opteron processors, up to 12GBps per node and 800MBps per storage module. The low-latency system uses industry standards such as HyperTransport and PCI Express. Pricing starts at \$50,000.

Server Appliance

■ **MailFoundry** has updated its 2100 and 4100 antispam appliances with new motherboards, faster CPUs, included RoHS compliance, and an improved chassis that has a smaller rack footprint. Both appliances use Intel motherboards, include new hard drive platforms, and feature updated antispam firmware that's built into the unit's integrated flash boot module. The new rackmount

chassis is physically stronger and eliminates the need for a separate rail kit. The 2100 and 4100 are available now and cost \$1,999 and \$3,499, respectively.

Storage

■ **Dynamic Network Factory Storage** introduced a new RAID subsystem, the Enterprise F16fz. This product supports SATA-2 (up to 750GB) and Dual 4Gb Fibre Channel. It is available with up to 12TB of storage capacity. It functions as either direct-attached storage or as a device connected to a Fibre Channel switch. The Enterprise F16fz is available in capacities of 2 to 12TB and supports WD Raptor drives in capacities of 36 to 150GB. An additional 1GB of RAID cache is also available. The device includes a triple-redundant power supply and an incorporated environmental controller. It supports RAID 0, 1, 0+1, 3, 5, and 6, as well as JBOD. Prices start at \$12,000.

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■ **iQstor Networks** unveiled the iQ2880, a 4Gbps FC (Fibre Channel) storage system designed for SMEs. The iQ2880 features integrated storage features such as volume management-based virtualization, snapshot, mirroring, remote replication, storage provisioning, and policy-driven capacity growth. To enable the integrated storage services, iQ2880 uses an embedded wizard-based configuration and management graphical user interface. Each iQ2880 supports up to 15 drives providing 4.5TB of storage capacity using 300GB FC4 or 11.25TB using 750GB SATA2 drives and can scale to 72TB with FC or 180TB with SATA2 drives.

....

■ **NeoScale Systems** has added two products to its CryptoStor Tape family, which is made up of enterprise-class tape security appliances. The new products include the CryptoStore Tape FC712 and SC702. NeoScale says the FC712 is the industry's first tape security appliance to support native 4Gbps interfaces. The unit now lets customers double the amount of tape drives they can secure on one channel. The SC702 is a second-generation unit that secures data to SCSI-attached tape drives. Both devices include hardware-based AES-128 and -256 encryption, cryptographic authentication of tape data, centralized key management, and more.

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Lots Of Power In A Small Box

Shuttle Offers Small Form Factor PC That Packs A Punch

by Sixto Ortiz Jr.

SHUTTLE'S XPC G2 2200 is a small form factor computer packing high-powered desktop components. This combination translates into compelling value for businesses that need a small footprint desktop machine but don't want to compromise on power or features.

The tale of the tape for the XPC G2 2200 begins with the CPU: Users can configure their rigs with an AMD Sempron, Athlon 64, or Athlon 64 X2. And although the G2 2200 may be small, Shuttle fit plenty of high-end components in a small space. System features include DDR2 533/667/800 memory, VIA's K8M890 chipset with

integrated graphics, a SATA interface with RAID, PCI Express x16, and 5.1-channel surround-sound audio. The integrated graphics chipset may seem like a compromise but, according to Shuttle, it meets the intense graphical requirements of Microsoft's upcoming Windows Vista OS.

Business users value quiet computing, and the Shuttle delivers this via the company's unique cooling and noise reduction technologies. For example, an ICE (Integrated Cooling Engine) uses water-filled, nickel-coated copper tubing to deliver convection cooling.

The unit's fan is controlled using Shuttle's Smart Fan technology, which monitors system load and increases or

Product Releases

SOFTWARE

Application & Web Development

■ **SWsoft** released the latest version of its hosting automation and billing software, SWsoft HSPcomplete 3.3. The software integrates with upcoming releases of SWsoft Plesk and Plesk Expand and includes a PHP-based online store that offers a shopping cart-like storefront. The suite supports management node clustering, phone order verification, and third-party helpdesk integration and offers an automated update system that uses Up2date to identify and install patches. HSPcomplete 3.3 includes Plesk, Site-Builder For Windows, and Virtuozzo, as well as a new API and SDK.

Business Productivity

■ **Nuance Communications** launched its Nuance Mobile Speech Platform, which lets users speak queries to do such things as find ringtones and locations, do Web searches, and dictate an SMS or email. Users can also give voice instructions to have devices read back email, on-screen directions, and more, using the software's text-to-speech technology. The product uses the same technology that powers Nuance's Dragon NaturallySpeaking products. Integrated components include Local Search, Mobile Navigation, Content Search, Mobile Web Search, and Mobile Communications. The Mobile Speech Platform is now in beta and is expected to be available next year.

■ **Sage Software** released version 7.1 of Sage BusinessVision 50 Accounting, its business management software targeted at small businesses. The software includes POS, PO, sales analysis, and payroll functionalities, as well as credit card options and automatic PO creation capabilities. Version 7.1 supports automatic invoice duplication and can convert old invoices to credit notes or quotes, provide alternate parts for out-of-stock components, and support direct deposit for Canadian employees. Additionally, ACCPAC Plus users can use a new Sage BusinessVision data migration tool. Sage BusinessVision 50 Accounting 7.1 Standard Edition includes 18 modules and supports one, five, or 10 users, with the one-user version available for \$3,595.

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decreases fan speed accordingly. An increased number of strategically located air intake points ensures that cooling of key components is optimized, while a specially designed and tested power supply operates at a quiet 32dB.

Dr. Bernard Frischer, director of the Institute for Advanced Technology in the Humanities at the University of Virginia, says the Institute uses the Shuttle XPC to produce and exhibit complex, photorealistic 3D computer models. Frischer says he likes the Shuttle's easily upgradeable and standardized PC components, the small form factor, and the unit's mobility. For example, he took his Shuttle unit on a trip to Ecuador where, he says, it ran computationally intense 3D models without a hitch.

"They [small form factor PCs] are the obvious solution to so many problems—from reclaiming space on or under our desks to showing our work to best advantage while traveling—that I don't see why the Shuttle is the exception and the tower PC the norm," says Frischer.

Other companies that manufacture and sell small form factor PCs include EPoX (www.epox.com), Soltek Technology (www.soltek.com.tw), and AOpen mini PC (minipc.aopen.com). But, the Shuttle XPC G2 2200 provides compelling value by

packaging cutting-edge desktop computing technology in a small form factor that also runs quietly. ■



SNAPSHOT

Shuttle XPC G2 2200

Starts at \$599

AMD socket AM2 platform, boasting features usually found in higher-priced systems, including high-specification integrated graphics and audio, advanced cooling, and noise reduction technology

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Product Releases

Continued from Page 19

Customers can also subscribe to certain portions of the software.

Imaging & Printing

■ **Lexmark** introduced the LFM (Lexmark Fleet Manager) and ValuePrint. LFM is a managed print service that uses Lexmark tools and technologies delivered by channel partners. LFM enables the partner to provide comprehensive visibility and management of assets, billing information, consumables status and delivery, device availability, and fleet operational trends. The ValuePrint program expands on Lexmark's Impressions offering, which allows partners to offer their customers cost-per-page financing programs to lease printers and multifunction products. ValuePrint gives partners a way to bundle device and supplies costs with partner-led management and break-fix services into a single monthly payment for their customers.

Network & Systems Management

■ **CA** announced Wily Introscope for Microsoft .NET, software that manages J2EE and .NET application performance. Wily Introscope monitors .NET Framework-based applications and components in real time to remove a problem before it reaches an application. The software identifies transaction paths, isolates performance bottlenecks, and alerts IT staff to .NET Framework-based application issues. It features SLA Management and capacity planning with historical data reporting to allow

IT staff to plan for future capacity needs. Wily Introscope supports .NET versions 1.1 and 2.0.

■ **Chip PC** announced the latest version of its thin-client management platform, Xcalibur Global 1.2, which offers layered security, lets users manage devices locally and remotely, and can be deployed without user intervention. New features include interoperability with Microsoft SMS Server; the Session Desk Console, which lets IT personnel manage service requests; and the Virtual Desktop Center, which lets users better support virtual desktops.

■ **Chronicle Solutions** released netReplay 64-bit Linux OS version 3.2.1, network content software to monitor, capture, and text-index all user network communications. The real-time monitoring software can visually track, trace, and replay a user's digital content. Version 3.2.1 monitors email and attachments, Web pages viewed, Web form submissions, instant messages, FTP interaction, VoIP communication, and more and takes advantage of multicore processors to improve performance, speed monitoring, and search capabilities.

■ **TeamQuest** released software for the Unisys ClearPath OS2200. TeamQuest Harvest lets IT groups create an enterprise-wide view of information that impacts business operations from multiple sources. The software includes a Web-based interface and supports multilayer reporting.

■ **Wyse Technology** released the latest versions of two thin computing infrastructure management programs: WSM (Wyse Streaming Manager) 1.2 and WDM (Wyse Device Manager) 4.5. WSM 1.2 lets administrators remotely control devices from a console and guides users who are trying to complete specific tasks. It offers streaming device support for PCs and virtual machines and also offers active directory integration and application provisioning. WDM 4.5 offers additional support for back-end infrastructure by supporting Active Directory and such databases as MSDE, Oracle, and SQL Server. It also provides granular control over delegated device management responsibility.

Security

■ **Application Security** announced support for Oracle on Linux in AppRadar, software to monitor and security-audit database activity. AppRadar provides real-time monitoring and auditing to protect your database against application vulnerabilities and enforce regulatory requirements. Support for Oracle on Linux allows AppRadar to organize Linux security issues for compliance risk and defend the OS against internal and external attacks. AppRadar is part of AppSecInc's database security suite to protect both network and mission-critical databases.

■ **Courion** introduced ComplianceCourier, an Access Compliance platform which lets organizations maintain regulatory compliance for remote and virtualized application users. The offering integrates with the recently announced Citrix Presentation

Server application virtualization platform to ensure high availability, security, and performance. The ComplianceCourier will be available in the first quarter of next year.

■ **e-DMZ Security** has launched eGuardPost 1.2, which provides remote session recording and playback. According to e-DMZ, Version 1.2 now includes a VCR-like session playback tool that includes speed controls, pause, and time-stamp features. eGuardPost 1.2 also has session proxy protocols and configurable session duration controls.

■ **eEye Digital Security** has launched Blink Professional endpoint security software. The software includes application whitelisting, removable storage management, and dynamic policy support and is now Unified Client Security software rather than HIPS software. Blink Professional supports centralized deployment and management and features dynamic policy control, policy-based hardware access, execution control, protocol-based IPS, application protection, and antiphishing protection.

■ **Elcomsoft** has introduced Elcomsoft Distributed Password Recovery 1.4 to aid companies in password recovery procedures. The software provides distributed recovery of passwords and works in local and global networks through distributed processing. The password recovery server can be administered remotely, and it is possible to install and uninstall agents to remote computers. Distributed Password Recovery 1.4 can

Go to Page 21

Paving The Way For Change

Lumeta's Migration Service Eases Move From IPv4 To IPv6

by Daniel P. Dern

■ **IPv4 (INTERNET PROTOCOL VERSION 4)** has been in use on the world's packet-switching networks for more than a quarter of a century, handling the exchange of data packets. The data-oriented networking layer protocol of the TCP/IP suite, IPv4 implementations can be found on just about every networkable device, from PCs and routers to PDAs, cell phones, Webcams, and a growing number of consumer electronics.

But IPv4 lacks features needed by 21st century networks and their users for VoIP, multimedia, collaborative peer-to-peer applications, and other activities—features that are built into the next iteration of the protocol, IPv6.

The move from IPv4 to IPv6 has been slower than anticipated. However, IPv6's time is nearing. The OMB (White House Office of Management and Budget) has mandated federal agencies to transition to IPv6 by June 30, 2008. Microsoft (www

.microsoft.com) is making IPv6 the native IP stack enabled by default in Windows Vista and in its "Longhorn" server; applications such as Microsoft's Meeting Space relies on IPv6 features to let users collaborate without using centralized servers.

Lumeta, a provider of network intelligence solutions for enterprises and government agencies, recently announced its IPv4

SNAPSHOT

Lumeta IPv4 To IPv6 Migration Planning Service

Uses IPsonar to establish a baseline and uses snapshots to confirm what IP4 infrastructure remains

www.Processor.com/Lumeta

to IPv6 Migration Planning Service, making use of Lumeta's IPsonar network assurance product. The service is intended to assist federal agencies and commercial enterprises in making the transition in their network infrastructure.

Lumeta's service uses IPsonar to establish a baseline and then can be used to take

snapshots throughout the migration process, to confirm what IPv4 infrastructure is still remaining.

"Our service is for companies who don't have the time, or the expertise, to use it," says David Arbeitel, Lumeta's CTO. "Given the OMB deadline and the resources that may or may not be available in an organization, the additional help to jump-start the migration that our service offers can be useful."

"The actual migration can involve upgrading hardware or buying new hardware," says Jeremy Nazarian, vice president of marketing at Lumeta. "Our survey helps organizations understand what they'll need."

Arbeitel is not aware of any direct competition to his company's service. "We see people trying to use a manual procedure to baseline their IPv4 net or using products not intended for this. Most companies' existing network management applications are designed to collect data on devices you know about. IPsonar is intended for problems like this, to determine things you don't know about your network."

COMPONENTS

OCTOBER 27, 2006

New Expansion Possibilities

Koutech Offers Range Of Products Based On Emerging Standard

EXPRESSCARD is the next generation in expansion slots for your notebook computer, and Koutech is proud to offer a wide range of I/O expansion solutions based on this emerging standard.

Koutech's new ExpressCard products let you take advantage of the high-speed performance offered by the new PCI Express technology, using the new ExpressCard slot on notebook computers from Dell, HP, Toshiba, and many other major manufacturers.

The ExpressCard technology was designed to improve upon the PC Card standard and provide high-performance, modular expansion for desktops and notebooks in



a smaller form factor than current PC Card products, according to the PCMCIA.

Koutech currently offers three versions of the new ExpressCard:

- The **1002E Dual Port FireWire/1394a ExpressCard** includes two 400Mbps 6-pin FireWire/1394a ports and a Hi-Speed USB 2.0 port, using the latest PCMCIA ExpressCard/34 interface.

6-pin FireWire/1394a ports on an ExpressCard/34 module.

- The **1615E Dual Port FireWire/1394b (FireWire 800) ExpressCard** includes two 800Mbps 9-pin FireWire/1394b ports on an ExpressCard/34 module.
- The **7004E FireWire/1394a & Hi-Speed USB 2.0 Combo ExpressCard** includes two 400Mbps 6-pin FireWire/1394a ports and a Hi-Speed USB 2.0 port, using the latest PCMCIA ExpressCard/34 interface.

ExpressCards come with a five-year warranty and work with Windows 2000/XP/Server 2003. They support PCI-E and USB technologies, providing simple connections for scanners, printers, external CD/DVD writers, hard drives, and RAID enclosures.

Koutech ExpressCards are based on the ExpressCard/34 module (34mm wide), so

they can fit into either a Universal or 34mm ExpressCard slot. If an ExpressCard/34 module is inserted into a Universal slot, the internal guidance feature gently directs the module over to engage the connectors.

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Koutech Systems, Inc.

Product Releases

Continued from Page 20

recover passwords for many file types, including Microsoft Excel/PowerPoint/Word 2003/XP and Excel/Word 97/2000, PGP disks with conventional encryption, PGP self-decrypting archives, Personal Information Exchange certificates, Adobe Acrobat PDFs (128- and 40-bit), Windows Logon LM/NTLM, system architecture, and more. Distributed Password Recovery 1.4 costs \$599 for up to 20 clients, \$1,199 for up to 100 clients, \$2,399 for up to 500 clients, and \$4,999 for up to 2,500 clients.

Elcomsoft also announced ESR (Elcomsoft System Recovery), which lets users regain access to their systems after password loss or user privilege errors. The \$299 ESR is a boot disk that works on all PCs so that you can access and repair your system. ESR is based on Windows PE and is compatible with Windows NT 4.0/2000/Server 2003/XP. It also supports all RAID and SCSI devices using Windows drivers. The software dumps password hashes from SAM and SYSTEM files, as well as Active Directory databases, and incorporates them into a text file for password recovery.

.....

■ **FutureSoft** has released DynaComm i:scan 6.5, which includes new antispyware tools, USB security functions, and application and desktop lockdown. Additionally, FutureSoft has added day-zero protection and an antispyware scanning and cleaning engine from Sunbelt Software. DynaComm i:scan 6.5 also has tools for protecting data stored on USB devices, and administrators can use the software to create rules for which programs run and which users have permission to run those applications.

.....

■ **Sunbelt Software** has released its CWSandbox software, designed to automatically analyze malware samples for the purposes of security research, creating new signatures, forensic and criminal analysis, and improving threat protection. CWSandbox analyzes the threat in a controlled environment and outputs the results in XML, HTML, or text format.

.....

■ **SunGard** launched the latest version of its Protegent Surveillance, a compliance offering which assists users in the automation of trade and account surveillance, client suitability, and auditing. The latest release includes daily account risk review modules, alert management, consolidated client data auditing, and transaction- and account-based, antimoney-laundering capabilities. In addition, Protegent Surveillance delivers monthly account risk analysis scores and ranks, as well as a daily analysis of account compliance.

Storage

■ A new version of **Quantum's** StorNext FX data management software is now available. StorNext FX 1.4 adds support for SGI IRIX 6.5.29 and Red Hat Enterprise Linux Advanced Server 4.0 Update 3 clients. They join the software's long list of supported OSes, which includes Solaris, HP-UX, AIX, and Cray UNICOS/mp, in addition to Mac, Windows, and Linux distributions.

.....

■ **Stellent** released the Stellent Universal Records Management agent for Symantec's Enterprise Vault. Universal Records Management's agent architecture enforces retention policies and records management for all repositories via the single application. The software can automatically apply litiga-

tion holds to emails and other content across the enterprise, and according to Stellent, the combination of its software with Symantec's Enterprise Vault can result in reduced discovery costs and increased compliance.

Telephony

■ **Packet Island** released its VoIP life cycle management product, PacketSmart For Asterisk. The SaaS (Software-as-a-Service) software package includes 4- x 4-inch microappliances and Asterisk-based software agents, which customers can install on the Asterisk PBX. The package can troubleshoot network issues, assess the network for VoIP, simulate VoIP on a network, and provide continuous VoIP SLA monitoring. Packet Island offers PacketSmart For Asterisk for an annual service fee.

SERVICES

Hosting & Disaster Recovery

■ **Iron Mountain** introduced Retention Center, a Web-based records service that allows organizations to manage, monitor, and audit records for compliance and litigation requirements. Retention Center identifies records repositories with information needed for discovery and compliance audits and imposes a retention schedule for disposition activities. Most importantly, the Retention Center service can communicate and enforce litigation holds to reduce the risk of fines and sanctions. Iron Mountain's Retention Center is accessed via its customer portal, Iron Mountain Connect.

Messaging & Groupware

■ **Rackspace Managed Hosting** has added Managed Microsoft Exchange to its email

solution portfolio, giving companies access to an on-demand email and collaboration solution deployment. Rackspace says the fully managed service will transform Exchange Server 2003 into a scalable service in which customers will only pay for the mailboxes they plan to use. Rackspace is backing the product with its 24x7 Fanatical Support, with 99.9% application and 100% network uptime guaranteed. Email is protected by antivirus screening and spam filtering. Two weeks of deleted data is immediately recoverable, and 30 days of deleted data is recoverable in six hours.

Multiple IT Services

■ **MTI**'s new Residency Services offer comprehensive help with many aspects of IT infrastructure. According to MTI, expert consultants are available to advise on system architecture, technology implementation, administration, and project management. Areas of expertise include Microsoft Directory, Messaging, and Collaboration; business continuity; storage, archiving, backup, and recovery; virtualization and consolidation; and others.

Security

■ **Iomega** unveiled its OfficeScreen Managed Services, security services to protect remote access and counter network security threats from hackers, worms, and viruses. The OfficeScreen suite now combines Juniper Network's firewall, IPSec site-to-site VPN, and UTM and SSL VPN solutions with VeriSign's two-factor authentication into a single network security suite. The service is designed for small and medium-sized enterprises as a cost-effective method for protecting the network without hardware expenses or dedicated IT resources.

Built For Performance

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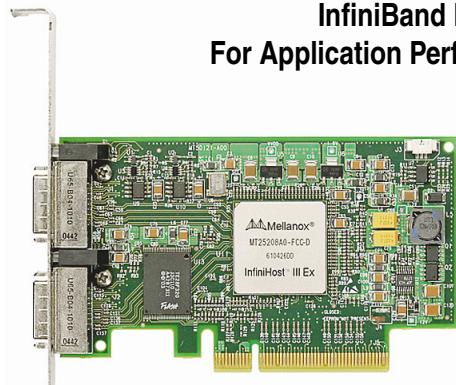
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OPINIONS

INFO-TECH • INSIGHT

HP Debacle: Telecoms At Fault Too

The recent scandal surrounding HP highlights a disconnect in the way we hold firms accountable. It's easy to chide HP for allowing an unethical tactic known as pretexting to be used on its behalf. However, also at fault are AT&T, Cingular, T-Mobile, and Sprint Nextel because they released personal information during the course of the probe into the activities of HP board members and reporters from CNET News.com.

Energy In All The Wrong Places

I find the lack of scrutiny toward these telecoms disturbing, but I guess I shouldn't be all that surprised. After all, the HP probe case has everything: shady private investigators spying on private citizens, a powerful executive's fall from grace, federal investigations, and who knows what else.

But forget about the morality of HP's actions. What prompted HP Chairman Patricia Dunn to do what she did? She did what any other chairperson in her position would—and should—have done when an information leak was discovered: tried to find the source of the leak and plug it. Companies have the right to protect trade secrets, intellectual property, and business interests; a board strategy meeting falls under this category.

Directors are required to sign confidentiality and nondisclosure agreements upon joining the board of a publicly traded company, which is just a legal way of saying, "Keep your mouth shut about what's said in the boardroom." So, did HP do the wrong thing by trying to uncover the persons responsible for violating that agreement? Of course not.

Could HP have gone about it in a more ethical and responsible manner? You bet.

But it's the telecom companies that dropped the ball on this one, focusing on their revenue-generating services instead of safeguarding their customers' private records. Hopefully the congressional hearing will turn public attention back to ensuring customer service through actionable privacy and security policies.

Telecoms, Face Thine Enemy

Pretexting is a form of social engineering, and the private investigators recruited by HP used it with success. Social engineering encompasses a range of methods used to manipulate and deceive employees in order to gain sensitive or confidential information. In most cases, perpetrators exploit human vulnerabilities by seeking the personal information of clients in order to commit identity theft. All an ID thief requires to fraudulently obtain credit cards in someone else's name is the full name, birth date, and Social Security number of the victim.

Because pretexting is targeted at front-line employees, staffers such as receptionists, customer service representatives, and the help desk are particularly at risk. But telecoms—and all other companies—can protect against pretexting by issuing PINs for customer access to personal records and accounts. Without the PIN, as provided by

the customer and the customer only, access to the account is denied along with any request for account information.

I also advise creating a callback policy. An individual not willing to provide a callback number—or who provides a number that isn't the same as the phone number attached to the account—should be red flagged. If a number is provided, the feature allows help desk and customer service staff to assess the request and verify the authentication information before processing a request.



ROSS ARMSTRONG

AUTHOR Ross Armstrong is a senior research analyst with Info-Tech Research Group, a London, Ontario-based research and professional services firm focused on providing premium research and advice geared to the unique needs of IT professionals of midsized enterprises. Armstrong holds a master's degree in English from the University of Western Ontario and has extensive experience in IT technical writing and automotive writing. He is also the author of the Info-Tech Research Group guides "Securing Your IT Environment" and "Moving: An IT Perspective."

Above all, customers must be made to recognize that ID theft is a real and growing concern and that the price of higher security is a more rigorous security process that may seem onerous when doing transactions but will ultimately safeguard their own privacy.

Government Does The Right Thing

There will be no whitewashing of this case. No one is going to walk away unscathed who shouldn't. The U.S. government

has been aggressively pursuing corporate violations of data privacy breaches, financial misreporting, and other IT-related infractions. Good for them! Such acknowledgement of the importance of punishing enterprises for data mishandling is positive.

On Sept. 25, an even better development occurred when a U.S. House of Representatives panel said that it would ask the chief executives of six major telecommunications companies to testify in its probe of pretexting as related to disclosures of client information by telecom companies. In fact, the U.S. Justice Department, California's attorney general, and the Securities and Exchange Commission have all jumped into the fray.

This prompted Info-Tech to conduct a quick poll of its client base, asking "What is the biggest problem in the current HP fiasco—AT&T, for allowing customer records to be stolen, or HP's alleged use of illegal investigation tactics?" Nearly two-thirds of respondents pointed the finger at AT&T. IT professionals understand how crucial it is to

protect against data theft due to pretexting, even if the mass media is only concerned about the "sexiness" of the HP case.

At the time of my writing, it's unclear as to who will bear the brunt of the government's wrath. An absolute certainty is that innocent civilians were again the victims of corporate bungling, and that must not go unpunished. ▀

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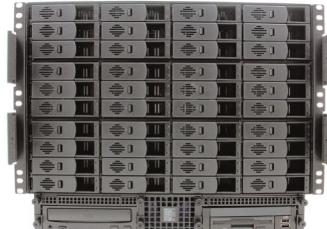


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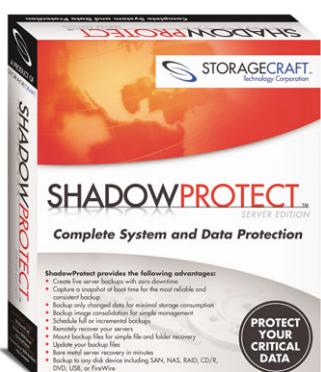
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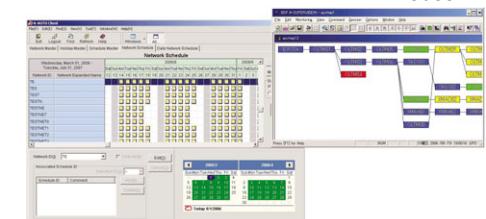
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BOOK  **REVIEW**

Playing Hide & Seek With Your Data

"Ambient Findability" Looks At Information & Connectivity Convergence

by David Garrett

• • •

PICTURE A WORLD in which you can find what you need when you need it, or better yet, what you want when you want it. Now picture a world in which your end users can do the same, speeding through terabytes of data and finding the precise information, or even the knowledge, they want.

Even in a Google world, perfect "findability" is an elusive target, like catching smoke. Just consider how toxic lost

information can be. If one end user spends 10 minutes a day searching for email, a budget report, or simply a phone number, that's roughly five days per year spent hunting things down—five days he could have spent talking up clients, shoring up networks, or polishing new product designs.

The very nature of searching, as well as a future where information is not only present, but palpable, forms the core of Peter Morville's best-selling "Ambient Findability."

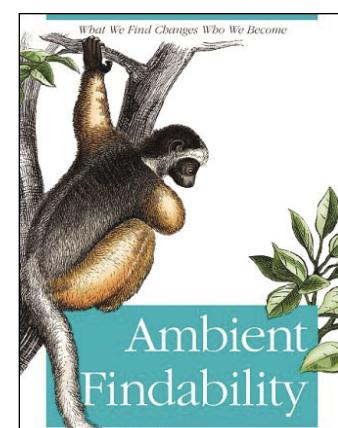
Designing Information

Morville is also the author of "Information Architecture for the World Wide Web" and now a well-known consultant and speaker (he recently addressed the Library of Congress). In "Ambient Findability," he argues that humans have always feared getting lost, a fear that drove us to map the known world and to mark those maps with the limits of our own knowledge. (Medieval cartographers, on drawing the farthest points that explorers had tread, simply wrote "Here be dragons," as if the

world beyond their knowledge was implicitly deadly.)

What applies to mapmakers applies to modern network engineers, charged with making reams of corporate data findable through networks, intranets, extranets, Web sites, and more and more, Google-like search tools. In fact, those same engineers, Morville notes, even use old seafaring terms ("navigate" comes to mind) when discussing the sifting, sorting, and searching of network data.

Morville also examines how other oddities of the human psyche, such as our longing for popularity and our fondness for gossip, can improve today's network search functions. Take Google's approach. It ranks search results not only by relevance but by popularity, putting sites that other sites link to at the top of its list and pushing "orphaned" sites to the bottom. Other tools, such as Digg.com, rely solely on users to publish the most popular sites, merging search features with the



"Ambient Findability"

Author: Peter Morville

Publisher: O'Reilly Media

Price: \$29.95

Format: Paperback, 188 pages

After all, the more there is to find, the more searching has to be done. And that means that data center owners, network engineers, and above all end users and rank-and-file knowledge workers will have to make refined searching as basic, and perhaps as rote, as breathing. □

Key Concepts

Peter Morville's "Ambient Findability" is an inquiry into the nature of searching for data in today's age of information overload. He examines a number of key search techniques and even delves into the psychology of finding knowledge and how it applies to the modern corporate network. The book also includes useful search hacks and advice that span the range of information architecture, knowledge management, and data storage.

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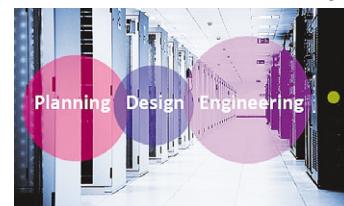
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The Road Ahead

What Will Tomorrow's Data Center Look Like?

by Elizabeth Millard

TECHNOLOGY CONTINUES to change at a breakneck speed, and data center hardware, software, and systems are no different—it seems that just when all appliances and applications are in place, the next greatest thing is announced and shipping soon.

With that in mind, what will the data centers of the next decade hold? In many ways,

Cold Storage

Although it's still in the design phase, the data center of the future could be based more on snowflakes than modular, boxy units. HP (www.hp.com) began pondering new ways to design data centers and, like many designers, started looking at nature for inspiration. After considering natural items such as stars, honeycombs, and seashells, the company decided to explore the snowflake because its multipronged structure could be stacked on top of each other.

Until the snow begins falling at HP, the company is looking toward consolidation for the near future, in a move that could have repercussions across the industry if it realizes the cost savings it expects. Early this year, HP announced it would be consolidating 85 worldwide centers down to six, a move made possible by reducing its application portfolio, eliminating several kinds of hardware, and employing more standardization in its architecture.

there will be improvements on current options, such as better cooling systems, but there could be radical changes ahead, as well.

Auto Pilot

Although it has shades of HAL in the movie "2001," the data center of the future is likely to have more automation capabilities at every level, from self-diagnosing and self-repairing software, to advanced provisioning features that go beyond tracking bandwidth usage to do traffic shaping and configuration changes.

Data center automation, or DCA, products are evolving quickly, according to Forrester Research analyst Galen Schreck, who observes that such tools began as basic software distribution and provisioning features and have grown into powerful platforms that govern many aspects of data center operations.

"While many products share a common foundation in configuration management, DCA products have broadened their reach into asset management, compliance auditing, and policy-based automation," he notes. As a result, there is an array of DCA products that overlap in capability, particularly in configuration management, Schreck adds.

The number of automated tools is related to the demand for better compliance, says Brett Rushton, vice president of strategy practice at Cadence Design Systems (www.cadence.com), an engineering and electronic design firm. But as companies begin to save money and time by using DCAs, more tools should become abundant. And that has the potential to be a boon for data centers, which could keep staff numbers low and still have extensive management capability.

"There is a rapid velocity of change in the technology environment and a higher number of changes to support," says Rushton. "Any way to automate management is going to be welcome in the data center environment."

Cool Customer

Because power and cooling are such major issues in data centers, analysts predict that next-generation cooling systems will begin to be introduced that address problems such as hot spots and inadequate flooring.

Better cooling systems will also contain costs because it will minimize the need for extensive, high-density systems. Already, HP (www.hp.com) is experimenting with computational fluid dynamics to model airflow around equipment and has put adjustable air vents in the flooring of its data centers.

The company is also interested in more liquid cooling technology that keeps individual pieces of hardware from getting too warm with water-cooled racks, an area of development at IBM (www.ibm.com) and Sun (www.sun.com), as well.

What's unclear is the direction of power systems and whether any technology would be able to provide relief from worry in that area. A recent survey from AFCOM (www.afcom.com), an association for data center managers, found that 81% of respondents had experienced a power failure in their data centers within the past five years, and the growing demand for enterprise and consumer power is stressing the national power grid.

The effect of high demand and limited resources could lead to more energy-efficient

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systems, analysts note. The automated tools of the future, too, could be more adept at routing power where needed and shutting it down when certain systems are offline.

Virtual Life

Virtualization is also expected to be a big buzzword in the coming years. Although the strategy—grouping computing resources for more power and efficiency—has been around for some time, companies have traditionally used virtualization for high-end machines.

Now, there's a trend toward employing the strategy for x86-based systems and creating virtual machines that can be used to reduce cost, manage larger workloads, and leverage IT resources more easily, according to IDC analyst Matt Eastwood.

He notes that large vendors, such as HP and Dell (www.dell.com), are targeting small to midsized enterprises in their virtualization pushes, giving smaller data centers the ability to create a tiered architecture more readily than ever before. □

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PROCESSOR

Don't Miss The Details

The Importance Of Picking A Network & Application Monitoring Tool

by John Brandon

• • •

SMALL AND MIDSIZED companies face the same challenge as the enterprise: monitoring network and application performance holistically and as accurately as possible.

Truth is in the details. Yet, for many companies—especially those without a team of experts who constantly analyze network and application performance—the details are sometimes lost. In some cases, it's an issue of analyzing the wrong data at the wrong time. Companies enter a reactionary mode when just one IT admin is available to monitor networks, plugging holes he finds instead of planning for them. In other cases, it's the analysis software that merely monitors endpoints or examines TCP handshakes. And, even with the right monitoring software, the problem becomes one of interpretation: understanding the benchmark reports, reacting appropriately, and drilling down enough that the admins understand the critical relationship between, say, the application and network layers and not just overall throughput.

"In order to accurately identify native traffic, a solution must be inline, sit transparently within the network (e.g., Layer 2), and not create latency as it is monitoring the traffic," says Jeff Gigoux from Procer Networks (www.proceranetworks.com), a company that makes performance monitor-

ing products. "Some products inaccurately identify traffic, leading administrators to creating ineffective rules, which potentially compromises the network functionality."

Performance: The Big Picture

Even though smaller companies don't have the resources of a large enterprise, they face the same three-pronged analysis problem: which data to analyze, which monitoring tool to use, and what to do with the data once you

Monitoring Software Criteria To Consider

- Support for native languages for TCP handshakes, HTTP, FTP, SQL, and others
- Real-time surveillance instead of just one-off monitoring reports
- Support for both LAN (Ethernet and Gigabit) and WLAN (802.11b/g/a)
- Graphical view that shows actual network and application performance
- Robust, multilayer network benchmarks for native language

have obtained it correctly. Whether you are managing a network with 25 hosts or 2,500, the same monitoring hurdles exist. And when a user complains that "the network is not fast enough," the same analysis complexities exist in environments of all sizes.

The solution is to choose a tool that monitors and analyzes all network layers at all times and then prioritizes the performance data for more thorough analysis. Tools that simply report node availability, CPU cycles, and network loads only present part of the picture. The result is that companies can then react to the poorly derived data without gaining a complete picture of performance that helps them plan for new capacity, potential security threats, and future application load. Some tools report that the network is running smoothly without anticipating problems.

"There's a difference between monitoring traffic at the various hops and endpoints vs. monitoring all traffic flowing across a network segment," says John Mark Walker from Hyperic (www.hyperic.com), whose Hyperic HQ addresses the issue directly. "The problem gets compounded when you start talking about large-scale, distributed networks, which are designed to appear as a single system. For this reason,

it's important to take network monitoring in the context of what is actually consuming or generating the traffic."

A robust tool must analyze all servers, middleware, and endpoints and should be customized to your environment. For example, one monitoring tool might emphasize application load performance, while another may be more suited to those who rely on a large database for applications. Others are designed to help admins understand policy violations on the network, such as peer-to-peer transfers. Some can monitor VoIP traffic to gain a clear picture of QoS and allow admins to react accordingly. The best monitoring tools present performance benchmarks using visual cues to help admins understand and interpret the data without having to hire an independent expert.

How Scalable, How Detailed?

The implication here is as much about a need for scalability as it is selecting a tool for your specific network. It's an intricate balance because some monitoring tools claim to analyze all network and application variables but might only examine TCP streams. Generally, it's unusual for one monitoring tool to accurately analyze all custom applications unless there are separate modules available for specific requirements. Typically, the monitoring software has to be programmed to understand the native transmission and report specific benchmarks rather than just summaries. When choosing a tool, it's important to understand the native language being analyzed. Many tools will analyze only HTTP or FTP traffic but not SQL traffic.

"Some analysis tools claim to accurately analyze application performance based upon inferences they make about application traffic at the network (Layer 3) and transport (Layer 4) levels," says Douglas Smith, president of Network Instruments (www.networkinstruments.com), a performance monitoring company. "These tools will claim, for example, to report application response time, when in reality the analyzer is measuring the TCP handshake completion time or TCP ACK response time. While these TCP metrics are useful in showing you TCP performance, they reveal nothing about problems your users could be having at the application level. If they just analyze Level 4, you won't be able to see any of the delay or failed transactions caused by server problems."

Also considered is forecasting ability. Too many companies will run analysis software only when there's a problem. "By continually monitoring networks and applications, the administrator can identify minor issues and take preventive measures before the issue impacts network performance," says Smith. "This requires a long-term view of network

Available Monitoring Software Options

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monitoring rather than sporadic, short-term network views, [which makes analysis much more difficult]. Long-term performance monitoring and analysis should be done prior to rolling out any new application."

One final aspect in selecting a tool is knowing whether a vendor actually understands its own product. Technical experts should be able to explain how analysis data is prioritized, how to read and react to benchmarks accurately, and how the software can be customized to your environment. Too many "cookie cutter" monitoring packages are sold for general purposes and without an in-depth understanding of the customer need. "Just knowing your network is fast and available might not help you answer whether or not it is properly servicing the needs of the infrastructure it supports," says Walker.

In the end, a more complete network and application monitoring tool can become an ally for admins who need to understand performance benchmarks at all layers. The right tool can become part of the IT planning process instead of just a suite of programs to use for network emergencies.

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Defining Segregation Of Duties

Best Practices For Migrating Application Changes Into Production

by Will Kelly

IMPLEMENTING A FORMAL CM (change management) process brings with it many changes to the production environment. Perhaps the biggest change is segregation of duties, sometimes called separation of duties, deemed by some in the CM community as one of the most important internal controls introduced by compliance programs such as Sarbanes-Oxley. However, the segregation of duties can sometimes lead to confusion and political/territorial confrontations.

Defining Segregation Of Duties

Segregation of duties focuses on segregating the duties involved in migrating application changes into production. It is an internal control element of compliance programs because it mitigates errors and opportunities for corporate fraud. For example, users who create data don't have

permissions to process their data, and developers don't have permissions to work with client-facing production systems.

Migrating application changes from development to test and forward to production requires a methodical process and an attention to risk mitigation. While compliance programs are often the impetus for segregation of duties, it is a best practice because it offers a "safety net" against mistakes and incompetence, which could take down a mission-critical production system and cost your SME revenue.

According to Ashley Owen, director of product marketing for enterprise application life cycle management solutions at Serena Software (www.serena.com), "The essence of separation of duties is one that seeks to reduce risk, increase quality, and lower the costs associated with corrective action within an organization's internal controls. Midsized organizations should

evaluate their present processes, whether documented or automated, and assess the level of risk or exposure to the business of noncompliance."

She adds, "The goal is to establish that no single individual should have control over all phases of the process or life cycle. Moreover, assess the opportunity for business and process efficiency and not as imposing unnecessary controls. In application development, for example, ensuring developers do not have access to the production environment requires a hand over from development to production control."

A replicable process should tie together development and production control roles that need to be fulfilled in order to move applications and application changes into production. Tools such as change management software can then be used to coordinate the overall process, which is especially important if production changes include staff participation from multiple business units.

Implementing Segregation Of Duties

For organizations that may have ad-hoc or laissez-faire production processes in place, the segregation of duties can prove to be a shock to the system. Thus, you need to establish a layer of production control around your production systems. Even if you are resource-thin, it's important to separate development from production. You can write your own process for defining the segregation that works with your available resources and staff onsite. There is no need to marry your process to some particular school of thought but rather the realities

you have to work with when migrating new applications and subsequent application changes, such as updates, patches, and service packs, into production.

Owen says, "Organizations need to look for defined repeatability, but this need not necessitate a complex process. Start by understanding current processes, whether documented or automated, and the role/responsibilities within that process. This may necessitate an understanding of the current tools and practices such that tools, users, and processes can be orchestrated and coordinated. Then establish the necessary approvals and checkpoints to ensure compliance."

Automation is an integral component to production control processes, and Owen states, "Automating the process is key and will ensure scalability, eliminate bottlenecks, secure timely approvals and assignments, and ensure accountability across the participating roles and stakeholders."

Jumping on the frameworks bandwagon isn't necessarily the ideal solution. "But it's best practice frameworks, such as CMMI [Capability Maturity Model Integration] and/or ITIL [IT Infrastructure Library], provide appropriate guidance, though I would recommend an incremental approach that accommodates the necessary change management disciplines to meet the needs in establishing segregation of duty," says Owen. You don't necessarily have to buy in to the best practice frameworks completely. Rather, you can use them as guidance to best define segregation of duties in your SME.

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Implementing Segregation Of Duties Checklist

Here are some tips for implementing segregation of duties into your production cycle:

- Evaluate your current processes for moving application changes to production.
- Understand the roles and responsibilities in your current processes.
- Document your current processes for moving applications to production.
- Establish a set of internal controls and then automate those controls wherever possible.
- Build a replicable process that segregates duties between development and production control.
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The Processor.com website features a prominent search bar at the top. Below it, there are several search filters and categories. On the left, there's a 'Physical Infrastructure' section with options like 'Cabling', 'Data Distribution', 'Environmental Monitoring', 'Fencing', 'Power Management', 'Power Protection', 'Storage', and 'Telephony'. In the center, there's a 'Business' section with 'Application Development', 'Business Productivity', 'Database', 'Email', 'File Sharing', 'Fax', 'General Networking', 'Hosted', 'Network & Systems', 'Security', 'Software', and 'Storage'. To the right, there are sections for 'Communications', 'End Nodes', 'Services', and 'Software'. Each category has its own sub-sections and search filters. The overall layout is designed to allow users to quickly search for specific products or services across different categories.

Hone Your Skills

Become A Better Data Center Manager

by David Garrett

• • •

THE EXPERTS HAVE A TERM: CPI, or continuous process improvement. It refers to the mindset, lacking at some companies and brimming over at others, of constantly improving the way business is done.

What applies to a business process applies to a person, too. Recently, *Processor* talked to career counselors and other experts to get advice on becoming a better data center manager—and believe it or not, none of the advice they gave was technical. The best data center managers, they say, have skills that go beyond 1s and 0s.

Step Back & Strategize

Kim Batson is known as the "CIO's Coach," and she's built a career showing IT managers how to hone their skills.

"Often technology managers think that to be respected in the workplace they must constantly prove their technical prowess and stay 'hands-on,'" she says. "This is

especially true if the manager rose up the ranks from, say, developer or architect. But, unless you work for a very small company, staying 'hands-on' can actually be a detriment to being a good technology leader."

Her advice? Step back and make sure your work aligns with your employer's key strategies. "Am I simply supporting the business, reacting to crises, and plugging holes," she says, "or do I have a vision to help the business move forward?"

Know Your Numbers & Talk Well

One of the best skills you can have, according to Brian Gabrielson of Robert Half Technology (www.roberthalftechnology.com), a leading provider of IT professionals on a project and full-time basis, is a knowledge of the interplay between technology and finance. Why? Because, in his words, data centers and IT departments "don't have to be cost centers" but "revenue acquisition tools."

Gabrielson also notes that speaking and writing well, not to mention the decidedly untechnical soft skill of conflict management, are also key to his clients. Having them is "the quickest way to make yourself

more marketable," he says. And if you don't have them, it's time to get on the ball.

"You can't start too soon," he says. In fact, a recent survey from Robert Half shows that 41% of CIOs pay more attention to nontechnical business skills than they did five years ago. Only 3% say they pay less attention.

The Ties That Bind

Brian Jaffe, co-author of the "IT Manager's Handbook: Getting Your New Job Done," says it's not just what you know but how well you know your IT vendors, your staff, and your own managers that can make or break your performance in the data center. You should know them

well enough—and treat them well enough—to make them partners and not mere colleagues.

"Building these partnerships is like adding oil to the machine," says Jaffe. "It just helps move things along. Not only are all these people becoming your partners, but they will also end up as your ally. As you build these relationships, you're building up good will."

He also cautions that it's hard work to form partnerships. "Good will," he says, "is a little more expensive than a kind word and a smile. It has to be backed up by quality work, integrity, delivering on commitments, a degree of humility, and recognizing that you need others as much as they need you."

After all, the people you work with, unlike the networks you work on, need more than 1s and 0s to do their jobs. They need commitment. They need the human touch. □

Best Skill: Use New Projects To Build The Bottom Line

Certified career coach and IT management expert Kim Batson says that starting new projects is one of the best ways you can improve your data center performance—but not just any projects. According to Batson, you

should ask yourself a simple question: "What initiatives have I proposed lately that have made the company more competitive? Expanded revenues? Saved the company money? Or raised customer satisfaction?"

Defining Segregation Of Duties

Continued from Page 31

Debunking Arguments Against Segregation Of Duties

Implementing segregation of duties often brings with it political and ter-

itorial challenges, with detractors saying it adds unnecessary gates to production and stymies responsiveness and flexibility.

However, segregation of duties reduces risk to your production systems, including

financial (potential fraud) risks. It also protects your production systems from incompetence or human error because having multiple staff members involved provides checks and balances against errors and mistakes.

Whether or not a compliance program has driven your data center to implement segregation of duties, you need to develop a project plan that accounts for the analysis and evaluation of your current processes, followed up by documenting the processes, ending off with a phased implementation of the changes. □



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WHAT'S HAPPENING

Premise-Based Or Hosted Solutions

Telrex's Solution: CallRex Professional & CallRex Hosted

by Julie Sartain

• • •

CALL RECORDING HAS ALMOST become a standard business practice as companies use recorded calls for dispute resolution, training, security, and, of course, regulatory compliance. The challenge that everyone who offers this service faces is the massive volume of calls that has to be processed—hosted solutions naturally address a much higher volume of calls than customer premise solutions.

Telrex (www.telrex.com), a company based in Kirkland, Wash., that pioneered the VoIP call recording market in 2000, has a new product called CallRex Hosted. This hosted solution presents hosted VoIP service providers another option to offer their customers in addition to Telrex's premise-based call recording solution, CallRex Professional.

From Premise-Based To Hosted Solutions

CallRex Professional integrates with softswitches from BroadSoft (www.broadsoft.com), Sylantro Systems (www.sylantro.com), and Tekelec (www.tekelec.com), says Bob Cordes, vice president of product management and marketing at Telrex, and allows small and medium-sized enterprises that subscribe to a hosted VoIP service to deploy a VoIP call recording solution that records their telephone calls on their premises.

"It's an attractive option for customers that have the resources and ability to manage a call recording solution onsite, but we

found that many other customers simply wanted to purchase call recording from their hosted VoIP service provider, just like they would order voicemail or any other value-added service," says Cordes. "In addition, many of the service providers who are currently selling CallRex Professional as a customer premise equipment solution began asking us for a hosted version of CallRex that they could deploy in their own operations center. We developed CallRex Hosted in response to these customer needs."

CallRex Hosted is the first hosted VoIP call recording platform for service providers, and it was the first packet-based, VoIP call recording solution on the market, according to Telrex.

"We sold call recording for IP PBXes to small and medium businesses for years," says Cordes. "We were familiar with the feature needs of small and medium customers. But we were also familiar with the needs of the service providers who deploy CallRex Hosted because we've been working with them for a long time."

How It Works

CallRex Hosted is a multitenant solution, notes Cordes, which allows service providers to provision licenses out to numerous customers. Information for each tenant is stored in a partitioned SQL database that provides individual customers with a high level of security for their recordings. Customers can

also use CallRex Hosted to monitor telephone calls as they happen, even those calls placed by employees working remotely or from home.

Messages are saved as standard WAV files and stored, initially, on the CallRex Hosted server, says Cordes. Individual service providers decide how long messages are stored before they're moved to each customer's permanent storage location. The CallRex Hosted



user interface can access these recordings regardless of where they're stored.

For security purposes, service providers can't access a customer's recorded calls or monitor their calls from the CallRex Hosted user interface. Service providers must log on with a customer's account information (with the customer's permission).

This product includes a full range of call recording features, including the ability to record any call on demand or automatically record calls using a range of call-recording triggers. Some customers record 100% of all calls; others set parameters for recording, while still others use a random process. Each customer can define its own recording settings, and multiple tenants are housed on a single CallRex Hosted server.

The Web-based user interface allows customers to access all of their recorded calls and to configure and administer the call recording settings from their offices. If customers are uncomfortable defining their

own custom settings, service providers can configure and administer these settings for them. They can also define the administrators' access levels and which customer accounts administrators can access. This allows service providers to define senior- and junior-level system administrators and then assign teams administrators to each customer.

Enhanced Features Through Add-Ons

Telrex offers two add-on products geared specifically for the call center market, notes Cordes. Both are customer premise-based and integrate directly with CallRex Professional but can also be in a standalone deployment to integrate with CallRex Hosted.

These add-ons are CallRex Agent Evaluation, which allows customers to score recorded calls and coach their call center agents using specific examples from a recorded call, and CallRex Multi-Media, which records desktop computer activity and enables call center managers to monitor an agent's computer desktop, says Cordes.

While CallRex Hosted is currently in a phased rollout, CallRex Professional is deployed as a customer premise solution at many hosted customer sites integrating with the customer's hosted service provider, says Cordes. "We have a wide range of these hosted customers, including a prominent security and protective services firm in the southwest that provides security services, polygraph tests, and background checks; a California ambulance service providing standby and emergency ambulance services; and a nation-wide energy company. These companies use CallRex call recording for dispute resolution, training, and to address legal requirements to record calls," he says.

The rise of home-based call center agents and hosted call center solutions is the key driving force behind this new CallRex Hosted product, says Cordes. With it, customers can easily record any employee, regardless of where she is located, even at home. Future releases of CallRex Hosted will incorporate the CallRex Multi-Media and CallRex Agent Evaluation add-ons. □

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PROCESSOR

The screenshot shows the Processor.com website's search and listing interface. At the top, there's a navigation bar with links for 'Welcome, Lori! / Log Out', 'My Special Features', 'Sign up NOW for the Processor.com Weekly Update!', and categories like 'Physical Infrastructure', 'Communications', and 'End Nodes'. Below the navigation, there's a search bar with the text 'Find ALL New Product Information With ONE CLICK!' and a large 'All-In-One Search' button. On the left, there's a sidebar with options like 'Post A Free . . .' (with 'For-Sale Listing' and 'Want-To-Buy Message' highlighted in red), 'Find Vendors', 'Industry Jobs', 'Subscription Headquarters', 'Advertising', 'About Us', and 'Extras'. In the center, there's a search results area titled 'Processor Listings Customers' with a search bar for 'Searched For: Employee=1699 and ordered by Company Name Number of Matches: 0'. At the bottom, there's a form for entering search criteria like 'Record #', 'Employee #', 'Company Name', 'Phone/Fax', 'City', 'State', 'Country', and checkboxes for 'Show only customers whose listings need to be reviewed' and 'Show only customers with listings'. There are also buttons for 'Sort list by: Company Name' and 'Search'.

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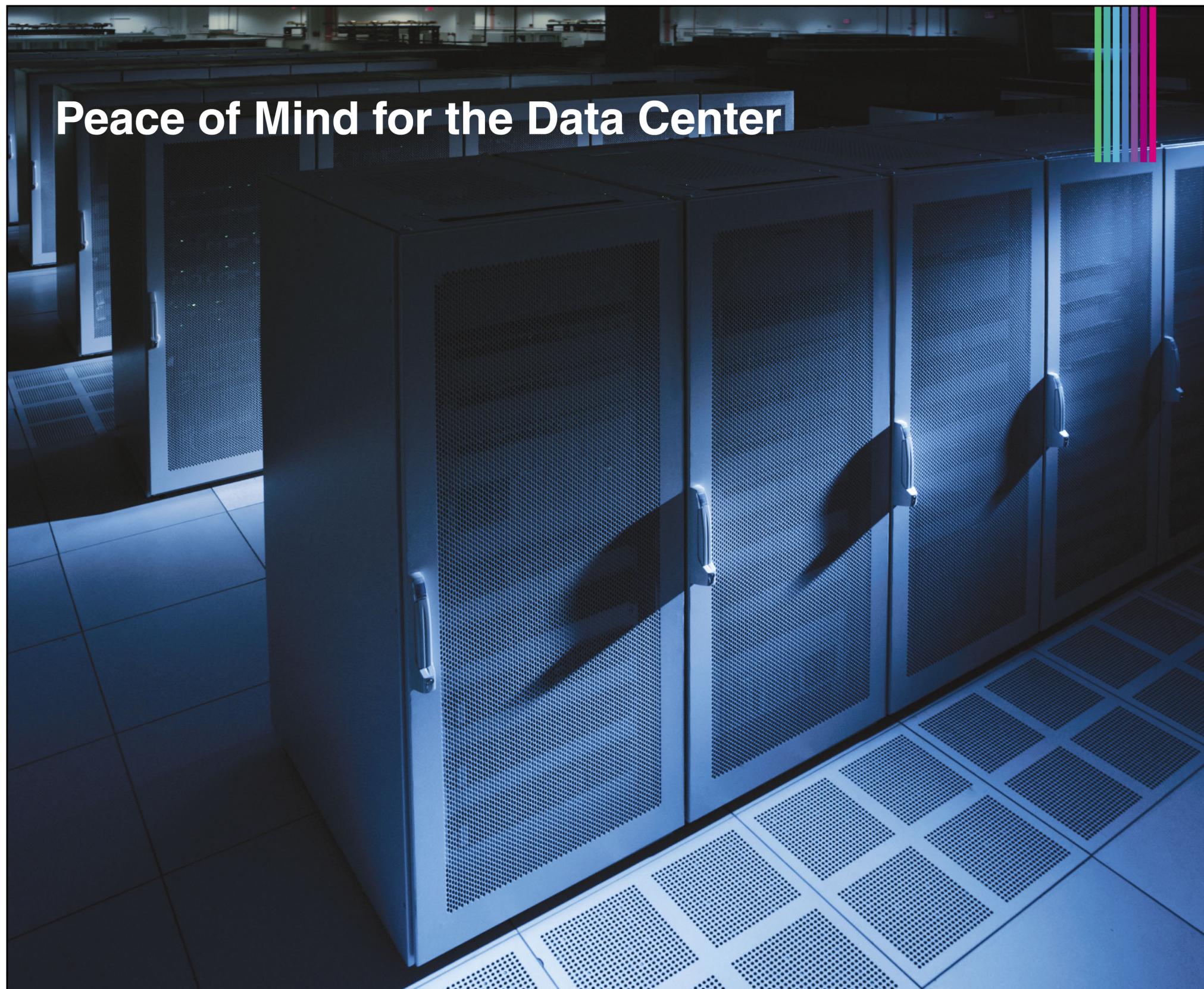
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